

SUBJECT CLITICS IN CHILD FRENCH

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ABSTRACT

Megan Kathryn Gotowski: Subject Clitics in Child French
(Under the direction of Misha Becker)

There has been debate over whether French subject clitics are affixes denoting agreement (Legendre et al. (2010); Culbertson 2010), or syntactic arguments (de Cat 2005). The analysis of clitics as affixes has been motivated by "subject doubling," in which a strong pronoun or full DP precedes a subject clitic, in child French. In this thesis, I will address these two previous interpretations of clitics, and I will offer an alternative analysis; French-speaking children may initially represent clitics as affixes as a result of competing grammars. As they acquire the target grammar, they will then reanalyze clitics as arguments. Subject doubling may therefore correspond to a stage in acquisition. I will present an analysis of the Palasis (2010) corpus from CHILDES, and contend that differences in the production rates of doubling in child and adult French, and in the syntax of child and adult French, provide support for this claim.

In memory of Danielle Horetsky

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CHAPTER 1: INTRODUCTION

In French, subject pronouns are often *clitic* pronouns, as in (1), and may replace of a full DP as in (2). These subject clitics form a kind of unit with a finite verb and rely on that verb as a "host." They are unable to stand alone, and thus responses to questions like that in (3) are ungrammatical. The French subject clitics are listed in Table 1.

- (1) **Je** dessine une image.
 SCL.1SG draw.PRES.1SG a picture
 'I draw a picture.'
- (2) Jacques aime le dessin. / **Il** aime le dessin.
 Jacques like.PRES.3SG the-drawing/ SCL.3SG like.PRES.3SG the-drawing
 'Jacques likes the drawing/He likes the drawing.'
- (3) "Qui veut une pomme?"
 who want.PRES.3SG an apple
 'Who wants an apple?'

***Je.**
 SCL.1SG
 ('I.')

Table 1 French Subject Clitics

Person	Singular	Plural
First	Je	Nous
Second	Tu	Vous
Third	Il, Elle, On	Ils, Elles

The status of French subject clitics is quite controversial. Some linguists, such as de Cat (2005, 2007), believe that French subject clitics are syntactic arguments, whereas others, such as Legendre et al. (2010) and Culbertson (2010), claim that they are preverbal, inflectional affixes. The former claim is known as the *syntactic interpretation*, while the latter is known as the

morphological interpretation. The claim that subject clitics are affixes is supported by finding constructions in which there are strong pronouns and full DPs placed directly before the clitic pronoun, as in (4) and (5). Legendre et al. (2010) and Culbertson (2010) have found that these constructions are regularly attested in child French in the corpora (Champaud, Pauline, and York) on CHILDES that they consulted (MacWhinney 2000).

- (4) **Moi** **je** danse.
 PRON.1SG SCL.1SG dance.PRES.1SG
 '(Me) I dance.'
- (5) **Antoine il** joue le foot.
 DP SCL.3SG play.PRES.3SG the football (soccer).
 '(Antoine) he plays soccer.'

The strong pronouns and DPs in these constructions could theoretically be analyzed as the overt syntactic argument instead of the clitic. These constructions have specifically been referred to as instances of *subject doubling*, because there is both a strong pronominal element and a subject clitic before the verb. It should be noted that these constructions have also been referred to as examples of left-dislocation by those who argue for a traditional analysis of clitics as syntactic arguments. For the purpose of this research, however, I will refer to the production of any strong pronoun or full DP before a subject clitic as "doubling."

The purpose of this research is to follow up on this debate in an attempt to determine the status of the subject clitic in (Colloquial) child French. The research questions motivating this research are the following: (1) Do French-speaking children frequently produce strong pronouns and full DPs before subject clitics (i.e. am I able to replicate the findings of Legendre et al. (2010) and Culbertson (2010))? (2) How might this reveal how subject clitics are represented? And how does the syntactic analysis of clitics bear on other aspects of French syntax? And most importantly, (3) do children have a different representation of subject clitics than adults? Previous research has attempted to answer the first two questions, but, as far as I am aware, has

not attempted to provide an answer to the third question. This last question will be the focus of the research to be presented here.

1.1 Previous Research

There are two contrasting interpretations that have been proposed, one that asserts that subject clitics are syntactic arguments (Kayne 1969; de Cat 2005; 2007), and another that claims that they are inflectional affixes (Miller 1992; Bonami & Boyé 2007; Culbertson 2010; Legendre et al. 2010). The former interpretation corresponds to how subject clitics have been traditionally analyzed in the literature, and is supported by de Cat (2005, 2007), who maintains that strong pronouns and full DPs before subject clitics are dislocated subjects found in Topic position. This view is known as the syntactic analysis of subject clitics (de Cat 2005). In contrast, Culbertson (2010) and Legendre et al. (2010) argue that doubled constructions reinforce an affixal interpretation, in which the clitic is considered to be a verbal affix denoting agreement (whereas the strong pronoun or DP would be the syntactic argument instead). This view is known as the morphological analysis (Legendre et. al. 2010).

These two interpretations make predictions not only about the rates of doubling, but also about other aspects of French syntax. In particular, Legendre et al. (2010), Culbertson (2010), and de Cat (2005, 2007) have all investigated *ne*-retention in negation and subject-verb inversion in questions. The *ne* marker is believed to be a clitic, so if it intervenes between the subject clitic and the verb, this discredits the morphological analysis and supports the syntactic analysis. De Cat (2005, 2007) claims that *ne* is still retained, as in (6). Conversely, Legendre et al. (2010) and Culbertson (2010) claim that *ne* is rarely retained in Colloquial French, as in (7).

- (6) Il **ne** veut pas un poire.
 SCL.3SG NEG want.PRES.3SG not a pear
 'He doesn't want a pear.

- (7) Il veut pas un poire.
 SCL.3SG want.PRES.3SG not a pear
 'He doesn't want a pear.'

The subject clitic is also not expected to move from its position in the clause and invert with the verb if it is an inflectional affix; high rates of subject-verb inversion would then weaken the morphological analysis, but strengthen the syntactic analysis. De Cat claims that inversion is still attested, as in (8), whereas Legendre et al. and Culbertson argue that rates of inversion are low, resulting in yes/no questions like (9).

- (8) Peux-tu voir l'écran?
 able.PRES.2SG-SCL.2SG see.INF the-screen
 'Can you see the screen?'

- (9) Tu peux voir l'écran?
 SCL.2SG able.PRES.2SG see.INF the-screen
 'Can you see the screen?'

Previous research has relied on child French to support the status of clitic pronouns in the language as a whole. By framing the debate in this way, a third possibility has seemingly been overlooked: French-speaking children may have a different interpretation of subject clitics than adults. It could be that the reason that the child data suggests an affixal interpretation (following Legendre et al. (2010) and Culbertson (2010)) is because children do in fact represent clitic pronouns as affixes; however, instead of this being an indication that French subject clitics are affixes in the adult grammar, it may indicate that French-speaking children pass through a stage in the acquisition process in which they analyze them as such. This possibility is the focus of the research, and will be outlined in more detail in section 4.3.

1.2 Research Goals and General Results

The purpose of this research is to determine how French-speaking children represent subject clitics, and if they represent them differently from adults. In order to accomplish this, I analyzed the Palasis corpus on CHILDES to find the rates of subject doubling in child and adult

French, and to examine other aspects of both grammars (namely *ne*-retention and subject-verb inversion) to find how syntactic structure reveals how French clitic pronouns function.

As noted above, previous research has framed the debate in a way that suggests children and adults have the same representation of clitics. The problem with this approach is that it assumes that child French is indicative of adult French. However, it is known that children pass through several stages in acquisition in which their grammar deviates from the target grammar. Children are sensitive to the input that they receive, and this input shapes their grammar. While the status of the clitic is a matter of debate, it is known that French clitics have properties that are associated with both arguments and affixes. This implies that children are presented with rather conflicting evidence as to how to interpret these elements. The alternate hypothesis that I propose is that children pass through a stage in acquisition in which they analyze subject clitics as affixes before they learn that these clitics are syntactic arguments in adult French. I am claiming that child and adult French differs in respect to the representation of subject clitics. Specifically, I argue that children are in the process of analyzing competing grammars, one in which the clitic is an affix, and the other (the target grammar), in which the clitic is an argument. In this respect, I am following the variational model of language acquisition, as developed by Yang (2002, 2004).

The results from the analyses presented here demonstrate that there are in fact noticeable differences between child and adult French in regard to the behavior of clitics, consistent with the claim that subject doubling actually corresponds to a stage during the acquisition process. There is a statistically significant contrast between the children and the adult in the overall production rates of doubling, and in the rates of *ne*-retention. Certain aspects of the adult's production suggested an affixal interpretation (in line with the morphological analysis), such as a

low rate of subject-verb inversion; nevertheless, there are other characteristics that indicate that subject clitics are indeed functioning as arguments in the adult grammar. For one, adult French is still behaving like a non-null subject language; if clitics were affixes, a strong pronoun or DP would be expected to be found with every clitic (qua affix), as an overt subject is required. This has not been substantiated through these analyses. In addition, the rate of doubling with strong pronouns is rather low for the adult, in comparison to the rate for the children. This is not surprising if the adult's "doubled" constructions are really examples of dislocation. These results, demonstrate that while there is reason to believe that subject clitics are functioning as syntactic arguments in adult French, the children in this corpus seem to be representing subject clitics differently. Their production indicates that clitics function as verbal affixes in their grammar, for reasons that will become evident in this analysis.

CHAPTER 2: GENERAL PROPERTIES OF CLITICS

The term *clitic pronoun* is difficult for linguists to define because it is linked to several distinct grammatical elements (Nevis et al. 1994). In general, a clitic is an element that forms a syntactic or phonological unit with a word, its "host;" clitics are not selective as to what that host must be, but rather attach to whatever word it is adjacent to, regardless of grammatical category, within a given phrase (Zwicky 1977; Sportiche 1995, 1996; Spencer & Luís 2012). If a clitic attaches to the left of its host, it is known as a proclitic. If it attaches to the right, it is an enclitic. If it is inserted within its host, then it is known as an endoclititic (Spencer & Luís 2012). Because they attach to a host, they behave phonologically like affixes. However, because they attach to any adjacent word, they do not behave like affixes, morphologically. It is also possible for clitics to appear in clusters; more than one clitic may attach to a single host.

Clitics may function as a type of pronoun. There are both strong and "deficient" personal pronouns, the latter including weak pronouns as well as clitic pronouns (Cardinaletti 1999; Cardinaletti & Starke 1999). According to Cardinaletti (1999), strong pronouns behave like full noun phrases (DPs), which are able to stand alone, without a host, whereas deficient pronouns are not independent entities.

There are several different theories as to how clitic pronouns should be characterized syntactically, particularly in regard to where they are located in the structure and where they are generated. There are different approaches based on the theoretical model that is assumed. For the purpose of this thesis, I will discuss different analyses proposed within a generative grammar framework. These interpretations differ in the placement of the clitic within the larger structure.

The main divide is whether or not clitics are moved into their structural position or base-generated (Manzini & Savoia 2004). Kayne (1975) argues that clitics are generated in an argument position and then moved to adjoin to the verb, or moved to a functional head (Kayne 1989, 1991, 1994). Rizzi (1986), and Brandi and Cordin (1989) believe that clitics are functional heads and are base-generated in this position. In both of these accounts, however, the subject clitic is argued to be located in [spec, IP], the same position as a full DP subject, as in (10).

(10)



While the purpose of this research is not to determine which model is best, these approaches will be referenced as representative of a syntactic analysis of clitic pronouns (see section 4.1), as they have been referred to rather often in recent research on subject clitics in child French (cf. de Cat 2005, 2007).

Because of the properties that clitics exhibit, it is difficult to determine how to distinguish a clitic pronoun from other weak pronouns and affixes.¹ Zwicky and Pullum (1983) proposed several criteria intended as a method to determine whether or not a given element is best treated as a clitic or as an affix. The following are their criteria.

(11) Zwicky-Pullum Clitic Criteria:

- A. Clitics can exhibit a low degree of selection with their hosts, while affixes exhibit a high degree of selection with respect to their stems.

¹ And, in fact Cardinaletti (1999), refers to some of the French clitic pronouns as weak pronouns.

- B. Arbitrary gaps in the set of combinations are more characteristic of affixed words than of clitic groups.
- C. Morphophonological idiosyncrasies are more characteristic of affixed words than of clitic groups.
- D. Semantic idiosyncrasies are more characteristic of affixed words than of clitic groups.
- E. Syntactic rules can affect words, but cannot affect clitic groups.
- F. Clitics can attach to material already containing clitics, but affixes cannot.

The Zwicky-Pullum criteria are certainly helpful in determining what constitutes a clitic, as opposed to an affix, but these are only guidelines that reflect general characteristics that clitics typically have; the criteria are not intended to be applied as a diagnostic with guaranteed results (Spencer & Luís 2012, henceforth S& L 2012). This is because there are clitics that behave like affixes, in that they do not meet some of the Zwicky-Pullum criteria.

This is not to imply that all clitics are ambiguous. There are several examples of clitics and affixes that, to a greater or lesser extent, fit the aforementioned criteria. For example, the weak form of the copula in the third person singular ('s) behaves like a "standard" clitic in that it satisfies all of the criteria. The first criterion (A) states that clitics are not selective; they will attach to an adjacent word regardless of its grammatical category. This is the case with this verbal form; the weak form attaches to whatever word is at the periphery. Consider the sentences in (12-16).

- (12) John's an athlete.
- (13) The door's open.
- (14) Where's the classroom?
- (15) The guy over there's my friend.
- (16) The person beside him's a linguist.

This weak form also satisfies criterion (B), which states that clitics are not associated with arbitrary gaps. The element in question does not avoid attaching to a particular category. There are also no morphophonological idiosyncrasies, in regard to criterion (C), that are specific to this form of the verb. The only morphophonological change associated with this pronoun is

that the phoneme /z/ becomes [s] after a voiceless non-sibilant, but this reflects general English allomorphy, so it is thus not a true idiosyncrasy; the morpheme /s/ is pronounced as a [z] in this environment. There are also no known semantic idiosyncrasies, as mentioned in (D). The strong form and the weak form of the copula have the same meaning; (17) is equivalent to (18).

(17) John is an athlete.

(18) John's an athlete.

The weak form of the copula is dependent on its host; it cannot be separated from it and stand alone, nor may material intercede between it and its host. As it forms a cohesive syntactic unit with its host, it is not affected by separate syntactic rules. It does not act like a freestanding word, in this regard, and satisfies criterion (E).

The weak form of the copula does not attach to other known clitic pronouns, but it may attach to known affixes, thus respecting the last criterion specified in (F). In sentence (19), for example, the copula is attached to the gerund 'singing', which contains the affix *-ing*.

(19) The singing's good.

By the Zwicky-Pullum criteria, therefore, the weak form of the copula is best classified as a clitic and not as an affix. The only feature this clitic pronoun has in common with affixes is the fact that it may not stand alone, but clitic pronouns and affixes behave alike in this respect; criterion (E) is not the most reliable in distinguishing clitics from affixes (S & L 2012). In sum, there is every reason to believe that the copula has a clitic form. This conclusion is not controversial, but an example of how clitics are "expected" to behave in their traditional form.

Zwicky and Pullum (1983) applied this set of criteria to determine if *n't* is an affix. Once again, following the guidelines listed in (A-E), the behavior of this particular element should indicate how it should be classified. In regard to (A), this form is highly selective, and thus it acts

like an affix in this respect. It only attaches to inflected modal and non-modal auxiliaries. Thus, (20) is possible, but (21) is not.

- (20) You don't like clams.
- (21) *He liken't the book.

Moreover, the contraction *n't* displays arbitrary gaps characteristic of affixes (Zwicky & Pullum 1983). It does not attach to all inflected auxiliaries systematically; there are a few forms that prohibit its attachment and refuse to serve as a host. For instance, the auxiliary *am* does not take *n't*; (22) is ungrammatical.

- (22) *I amn't going to school.

This type of gap is typically found in affixes, and not clitics. Zwicky and Pullum (1983) also claim that *n't* has morphophonological idiosyncrasies and thus, according to (C), behaves like affixes in this respect as well. The vowel in the auxiliary verb may change when *n't* is attached. Consider (23), which lists the phonetic transcriptions of the auxiliary *do* with and without *n't*. There are also auxiliaries that experience a more dramatic transformation, in which sounds are deleted and substituted as in (24).

- (23) do [du]
don't [dɒnt]
- (24) will [wɪl]
won't [wɒnt]

In regard to (D), this negative marker in English has a specific reading, and is thus more narrowly construed than when the full form *not* is used instead. Zwicky and Pullum (1983) give the following example, (25).

- (25) a. A good Christian can nót attend church and still be saved.
b. A good Christian cánnót attend church and still be saved.
can't

(25a) implies that church attendance is not required to be saved, whereas in (25b) the opposite is implied; the contracted form is only associated with the latter meaning. This indicates that the full form and the contracted form of *not* are not always synonymous and may be associated with different meanings, which explains the distinction between (25a) and (25b). This is not expected if *n't* is a clitic.

Lastly, the weak form of *not* needs to attach directly to the inflected auxiliary, and not to a clitic (Zwicky & Pullum 1983); (26) is possible, but (27) is not.

(26) I wouldn't've been late, but the traffic was horrible.

(27) *I would'ven't been late, but the traffic was horrible.

The strict ordering that *n't* obeys also recalls the behavior of affixes. Therefore, based on these criteria, Zwicky and Pullum (1983) determined that *n't* behaves like an affix, and not like a type of enclitic.

These specific examples of a clitic and an affix, respectively, are rather straightforward, but not all clitic pronouns and affixes are as easy to classify. There are a number of clitics that behave like affixes due to a property or set of properties that they exhibit. For example, affixes are often characterized as exhibiting strict ordering principles, but clitic clusters are also known to have a relatively fixed order in regard to how they cluster around a host, represented in a template (S & L 2012). For example, in Italian, if there is more than one clitic paired with the same host, they must be placed in the order in which they are found in the template from left to right (see Table 2) (Monachesi 1999; S & L 2012).

Table 2 Italian Clitic Template

<i>personal</i>		<i>locative</i>	<i>reflexive</i>	<i>accusative</i>	<i>impersonal</i>	<i>partitive</i>
mi (1PS) ti (2PS) gli (3PS masc.) le (3PS- fem.)	ci (1PP) vi (2PP)	ci	si	lo (masc. sing.) li (masc. pl.) la (fem. sing.) le (fem. pl.)	si	ne

Not all clitic systems show a strict ordering preference, however. In Polish, clitics are considerably less restricted in their positioning, especially in comparison to clitics in other Slavic languages (Migdalski 2006). Polish dative clitics may precede the accusative clitics, or they may be placed after them, in reverse order. Despite being classified as clitic pronouns, they do not always attach to their host, a verb, and in fact they are only ever adjacent to the verb when they are in a post-verbal position. In this respect, they have a significant degree of autonomy, despite being categorized as clitic pronouns.

Additionally, clitic pronouns may behave like affixes for morphophonological reasons, as many exhibit allomorphy triggered by their position in a clitic cluster. In Italian, for instance, the vowel in the clitics *mi*, *ti*, *si*, *ci*, and *vi* changes form to become *me*, *te*, *se*, *ce*, and *ve* whenever they are placed before an accusative clitic or the partitive *ne* (S & L 2012). Arabic clitics also exhibit morphophonological idiosyncrasies, in the sense that the clitic will assimilate with the stem and the other clitics within a word (Attia 2007). There are also clitic pronouns that display arbitrary gaps, despite such gaps being associated with affixes; in Italian, the first and second person direct object is not permitted to be adjacent to an indirect object clitic (Monachesi 1999; S & L 2012). There are similar gaps in the Spanish clitic system. For instance, the accusative and dative clitics (*le* and *lo*) are not permitted to be adjacent to one another; instead, the reflexive clitic pronoun (*se*) appears in place of the dative clitic (Ordóñez 2012). However, it should be

noted that these are gaps in regard to how clitic pronouns may attach with other clitic pronouns, and not gaps in regard to what verbs the clitic pronouns select.

Adding to the difficulty of analyzing clitics is the fact that there are "mixed systems," in which the weak pronoun behaves like a clitic sometimes and like an affix at other times (S & L 2012). An example comes from European Portuguese; pronominal forms behave like clitics when they are in a pre-verbal position, but like affixes when they are in a post-verbal position (S & L 2012). Other languages have mixed systems as well, including Udi, a member of the Northeast Caucasian languages. This language makes use of different person markers; those that appear on the right edge of the verb behave as enclitics, while all others behave like affixes (Harris 2000, 2002; S & L 2012).

There are also affixes that behave like clitics. While clitics may or may not exhibit strict ordering principles, affixes are not expected to show any variation in placement; in other words, affixes are often characterized by a fixed order (S & L 2012). However, there are cases of known affixal systems that display free, or relatively free, variation. An example of such a system is found in Upper Necaxa Totonac (UNT), an indigenous language spoken in Mexico. In this language, there are several verbal affixes. From this range of affixes, Beck (2008) identifies nine possible prefixes and fourteen suffixes. Interestingly, while these affixes may be ordered in a template, there are various positions for several of these affixes; certain affixes are found in multiple positions. The following table is the UNT verbal template taken from Beck (2008).

Table 3 Upper Necaxa Totonac (UNT) Clitic Template

-9	-8	-7	-6	-5	-4	-3	-2	-1	[0	1]	
I		Q	I				Q	I	(D+)R	I	(D)	
{FUT}	{1SUB}	{EXP}	{POT}	{PL.OBJ}	{PL.SUB}	{RCP}	{RT}	{STAT}	{L}	{OBJ.SUPP}	{L}	
{PAST}	{1OBJ}						{PATH}	{INCH}				
{OPT}												

2	3	4	5	6	7	8	9	10	11	12	13	14
a,b,c,d												
Q		I		Q	I		Q			I		
{AMB}	{DEB}	{IDF}	{IMPF}	{TOT}	{ST.PL}	{DEB}	{RPT}	{TOT}	{DIST}	{IDF}	{1PL.SUB}	{PFV}
{TOT}			{PROG}						{PROX}		{2SG.SUB}	
{DSD}			{PF}								{2PL.SUB}	
{RPT}											{2OBJ}	

I = inflectional affix; Q = quasi-inflectional affix; D = derivational affix; R = radical

Therefore, there are both clitics that behave like affixes, and affixes that behave like clitic pronouns. The ambiguous nature of clitics and affixes again highlights the uncontroversial idea that the Zwicky-Pullum criteria, and other observations about common properties of both, are guidelines, and not diagnostic measures.

CHAPTER 3: FRENCH PROCLITICS

In French, there are several syntactic elements that have traditionally been identified as clitic pronouns. They follow positioning rules, as has been observed with other clitic systems, and they are accordingly organized in a template with seven position classes. The following table, which has been reproduced from Bonami and Boyé (2007), lists the French proclitics.

Table 4 French Clitic Template

1	2	3	4	5	6	7
[1s,nom] je	<i>negation:</i> ne	[1s,acc/dat]: me	[3ms,acc,nonrefl]: le	[3s,dat,nonrefl]: lui	[loc]: y	[de]: en
[2s,nom] tu		[2s,acc/dat]: te	[predicative]: le	[3p,dat,nonrefl]: leur		
[3ms,nom] il		[3,acc/dat,refl]: se	[3fs,acc,nonrefl]: la			
[3fs,nom] elle		[1p,acc/dat]: nous	[3p,acc,nonrefl]: les			
...		[2p,acc/dat]: vous				

This research is primarily focused on subject clitics, i.e. those forms that are specified as nominative position in the template. These proclitics are placed adjacent to the verb, on its left edge. As may be expected, they form a phonological unit with the verb, at times even contracting with the verb. For instance, the first person subject clitic has both a non-contracted form (28) as well as a contracted form (29).

- (28) Je mange une fraise.
 SCL.1SG eat.PRES.1SG a strawberry
 'I am eating a strawberry.'

- (29) J'étudie le français.
 SCL.1SG-study.PRES.SG the French
 'I study French'

Kayne (1969) identified several properties that apply to French proclitics, although these are characteristics that, according to Cardinaletti (1999), apply to deficient pronouns in general. Kayne (1969) noticed that material cannot come between the subject clitic and the verb (with the exception of other clitics) and that clitics have a fixed order within a phrase (as indicated in the aforementioned template). He also determined that French subject clitics cannot be stressed (as in 30) or conjoined (as in 31a), although Sportiche (1995) contends that (31b) would be acceptable. These specific properties are indeed characteristic of clitic pronouns, not affixes, and they invoke criterion (E), "syntactic rules can affect words, but cannot affect clitic groups," and criterion (F), "clitics can attach to material already containing clitics, but affixes cannot" from the Zwicky-Pullum (1983) criteria.

- (30) ***Je** gagne le jeu.
 SCL.1SG win.PRES.1SG the game
 ('I win the game.')
- (31a) *Tu et je sommes heureux.
 SCL.2SG and SCL.1SG be.PRES.1PL happy
 ('You and I are happy.')
- (31b) Il et elle sont amis.
 SCL.3SG and SCL.3SG be.PRES.3PL friends
 'He and she are friends.'

French proclitics need a host and may only attach to that host and other proclitics also paired with that host. They also stand in direct contrast with strong pronouns, which may in fact be stressed and conjoined, as in (32) and (33), respectively.

- (32) **Moi** je gagne le jeu.
 PRON.1SG SCL.1SG win.PRES.1SG the game
 'Me, I win the game.'

- (33) Toi et moi, nous sommes heureux.
 PRON.2SG and PRON.1SG SCL.1PL be.PRES.1PL happy
 'You are I (we) are happy.'

However, Bonami and Boyé (2007) found that French proclitics also display properties that are characteristic of affixes, and of inflectional morphology in particular. They claim that French proclitics display arbitrary gaps, certain "positional effects," and morphophonological idiosyncrasies. French proclitics are also, to some degree, selective in only choosing a verb as a host; recall prototypical clitics are indiscriminate about what they will attach to (see chapter 2).

There are a few apparent gaps in the French proclitic system, which are suggestive of affixes (see criterion (B)), both in terms of restrictions that prohibit the co-occurrence of several forms, and in terms of clitics that may be omitted entirely.² For example, Bonami and Boyé (2007) explain that a clitic pronoun from the third position class is not permitted to be paired with one from the fifth position class. An example, (34), is taken from Bonami & Boyé (2007).

- (34) *Paul se lui présentera.
 Paul REFL.3SG DAT.3SG present-FUT.3SG
 ('Paul will present himself to her.')

French proclitics may be dropped at times, specifically those from the forth position class when they are adjacent to one from the fifth position class. Both the direct and indirect objects in (35a) may be replaced by object clitics, as in (35b), and the dative clitic may be dropped, as in (35c).

- (35a) Je donne le stylo à Marc.
 SCL.1SG give.PRES.1SG the pen to Marc
 'I gave the pen to Marc.'
- (35b) Je le lui donne.
 SCL.1SG ACC.3SG DAT.3SG give.PRES.1SG
 'I give it to him.'

² However, once again, these are co-occurrence restrictions between different clitics, and not restrictions between clitics and their hosts.

- (35c) Je le donne.
 SCL.1SG ACC.3SG give.PRES.1SG
 'I give it (to him).'

Another example of affixal behavior comes from position class effects. For example, reflexive clitic pronouns and dative clitic pronouns, which are both from the third position class (see Table 4), and are not allowed to co-occur (Bonami & Boyé 2007). For this reason, Bonami and Boyé (2007) explain that French proclitics are competing for a certain position in a phrase, and such positional effects are typical of inflectional morphology, as opposed to clitic systems.

Bonami and Boyé (2007) have also identified certain morphophonological and semantic idiosyncrasies associated with French proclitics. They claim that a clitic pronoun is sometimes able to fuse with its host, a finite verb, so that the clitic only appears in a phonologically abbreviated form. However, not all verbs "trigger" this fusion. Bonami and Boyé provide the following example, (36a), which features a first person subject clitic that is not fused to the verb; with the proclitic in this form, this phrase has two possible interpretations. The verb in this example may be either a conjugated form of *être* 'to be' or *suivre* 'to follow,' as these verbs are homophonous. When the clitic pronoun is fused to the verb, as in (36b), however, it the verb can only be *être*, and only one interpretation is possible (Bonami & Boyé 2007).

- (36a) [ʒə sɥi yn fiʃ]
 je suis une fille
 'I am a girl.'/'I follow a girl.'

- (36b) [ʃɥiynfiʃ]
 je suis une fille
 'I am a girl.'/*'I follow a girl.'

These observations about French clitics indicate that they are not prototypical instances of clitic pronouns. The ambiguous nature of French subject clitics, due to the affixal behavior of them, has contributed to the debate as to how they function. The status of French subject clitics will be discussed in detail in chapter 4.

3.1 Strong Pronouns before Proclitics and Subject Doubling

As previously indicated, just as there are "deficient pronouns," including clitics, there are also strong pronouns (Cardinaletti & Starke 1999). These strong pronouns function as full words that are able to stand alone. Unlike clitics, they are not dependent on a host. French has a set of strong pronouns that corresponds with its subject pronouns. The following table lists the French strong pronouns.

Table 5 French Strong and Clitic Pronouns

Person	Strong Pronoun	Subject Clitic
1PS	moi	je
2PS	toi	tu
3PS	lui (m), elle (f), soi	il, elle,
1PP	nous	nous
2PP	vous	vous
3PP	eux (m), elles (f)	ils, elles

These full forms are not in contrastive distribution with the clitic pronouns. The subject clitics are generally not able to be replaced with a strong pronoun, or an ungrammatical phrase results (as in 38).

- (37) Je vais au cinéma.
SCL.1SG go. PRES.1SG to.the movies
'I am going to the movies.'

- (38) *Moi vais au cinéma.
PRON.1SG go.PRES.1SG to.the movies
('Me am going to the movies.')

However, the third person masculine clitic pronoun may be replaced with its full form (as in 39) (Legendre, personal communication); no other subject clitic may be replaced with its full form in isolation in this respect, unless the full form is part of a coordinated DP, as in (40). However, this is not standard, as a subject clitic is often still included before the verb, as in (41).

- (39) %Lui aime le potage.
PRON.3SG like.PRES.3SG the soup
'He likes the soup.'
- (40) ?Toi et moi sommes étudiants.
PRON.2SG and PRON.1SG be.PRES.1PL students
'You and me are students.'
- (41) Toi et moi, nous sommes étudiants.
PRON.2SG and PRON.1SG SCL.1PL be.PRES.1PL students
'You and me, we're students.'

The strong pronouns may also function as the object of a preposition, as seen in (42). The strong pronoun could not be replaced with a clitic, whether or not it is in nominative or objective form, as the clitic pronoun needs a verbal host. Thus, (43) and (44) are ungrammatical.

- (42) Je vais au cinéma avec toi.
SCL.1SG go.PRES.1SG to-the movies with PRON.2SG
'I am going to the movies with you.'
- (43) *Je vais au cinéma avec tu.
SCL.1SG go.PRES.1SG to-the movies with SCL.2SG
('I am going to the movies with you.')
- (44) *Je vais au cinéma avec te.
SCL.1SG go.PRES.1SG to-the movies with OCL.2SG
('I am going to the movies with you.')

The full form may also be a dislocated object pronoun, which may be used for emphasis, as in example (45).

- (45) **Lui**, je joue au foot avec lui.
PRON.3SG SCL.1SG play.PRES.1SG to.the soccer with PRON.3SG
'**Him**, I play soccer with him.'

Strong pronouns may also be dislocated from the phrase, as in (46- 47). In this case, the pronoun is either left or right-dislocated from the clause containing the subject clitic.

- (46) **Moi**, j'aime les pommes.
PRON.1SG SCL.1SG-have.PRES.1SG the apples
'(As for) me, I like apples/ **I** like apples.'

- (47) **J'**aime les pommes, **moi**.
 SCL.1SG-like.PRES.SG the apples PRON.1SG
 'I like apples, (personally)/ **I** like apples.'

The strong pronoun in Topic position stresses the subject clitic. It is for this reason that strong pronouns have been referred to as emphatic pronouns (Tallerman et al. 2009).

De Cat (2007) acknowledges that dislocation is common in Colloquial French. However, it is not expected that a strong pronoun will surface with every subject clitic. In other words, the presence of a subject clitic alone should not *necessitate* the inclusion of a strong pronoun; these pronouns should only be included if a Topic reading is intended. As a consequence, there should be a difference in meaning between phrases without a dislocated strong pronoun or full DP and those with one. Consider (48) and (49).

- (48) Je veux le livre.
 SCL.1SG want.PRES.1SG the book
 'I want the book.'
- (49) Moi, je veux le livre.
 PRON.1SG SCL.1SG want.PRES.1SG the book
 (As for) *me*, I want the book.'

In (48), there is no emphasis on the subject. In (49), however, there is emphasis on the subject; the subject of this phrase is being singled out as the topic.

As previously indicated, however, it has been claimed that these strong pronouns and full DPs are now regularly included before a subject clitic and, moreover, incorporated into the main clause in Colloquial French, as in (50) and (51) (Tallerman et al. 2009).

- (50) Moi j'aime les pommes.
 PRON.1SG SCL.1SG-like.PRES.SG the apples
 '(Me) I like apples.'
- (51) Luc il joue au basket.
 DP SCL.3SG play.PRES.3SG to.the basketball
 'Luc (he) plays basketball.'

CHAPTER 4: THE STATUS OF FRENCH CLITICS

As mentioned, there have been two main analyses of French subject clitics: the syntactic interpretation and the morphological interpretation. In section 4.1 and 4.2, I provide a brief overview of these analyses. In section 4.3, I provide an alternate explanation of subject clitics.

4.1 A Syntactic Interpretation

The syntactic interpretation claims that French subject clitics are elements with θ -roles, located in the canonical subject position within a phrase (Rizzi 1986). Again, following the syntactic framework presented in chapter 2, the clitic is found in the [spec, IP] subject position in this analysis (de Cat 2005). They would be represented in the syntax with the same structure as in (10), reproduced as (52) below.

(52)



According to de Cat (2005), there are several problems with an affixal analysis of French subject clitics. First, she argues that having prefixal (clitics) and suffixal affixes (inflections) would be unnecessarily redundant; the subject clitic as an affix would only be able to specify minimal additional information such as gender with the third person.³ Another potential problem

is the fact that clitics are absent in certain contexts, such as when indefinite pronouns or quantifiers are used. For example, sentences like (53) are acceptable in French; the presence of a clitic would actually make them ungrammatical, as in (54).

- (53) Personne veut lire.
 no one want.PRES.3SG read.INF
 'No one wants to read.'
- (54) *Personne il veut lire
 no one SCL.3SG want.PRES.3SG read.INF
 'No one he wants to read.'

Another complication is the observation that other preverbal material (specifically other clitics) may intervene between the subject clitic and its verb (Kayne 1969; de Cat 2005). Zwicky and Pullum (1983) have argued that "clitics can attach to material already containing clitics, *but affixes cannot*" (emphasis added). In sentences like (55), the subject clitic does not come directly before the verb and, as a result, is claimed to be distinct from an affix.⁴

- (55) Je t'aime.
 SCL.1SG OCL.2SG-love.PRES.1SG
 'I love you.'

The negative element *ne* is also able to intercede between the subject clitic and the verb, as in (56); the negative element is not claimed to be an affix because it is structurally determined, and thus its position indicates the scope of negation (de Cat 2005).

- (56) Je ne mange pas de pain.
 SCL.1SG NEG eat.PRES.SG not of bread
 'I do not eat bread.'

De Cat (2005), Legendre et al. (2010), and Culbertson (2010) all agree that *ne* is not an affix. The disagreement stems from whether or not *ne* is still robustly attested in spoken French.

³ This is, of course, assuming that the morphological paradigm is "rich" enough to provide information about agreement. The attrition of the morphological paradigm would be an argument against the apparent redundancy.

⁴ However, this is assuming that object clitics are in fact clitic pronouns and not affixes.

If it is no longer attested, the idea that the subject clitic is actually an affix receives support, as non-prefixal material should not be able to occur there under such an interpretation. However, if it is still used productively in Colloquial French, then the syntactic analysis of subject clitics is supported, as the negative element intervenes between the clitic and the verb phrase. While de Cat (2005) argues that the York and Cat corpora provide evidence that *ne* is still used frequently, Augur (1994) and Culbertson (2010) found the opposite in the corpora that they consulted (see section 4.2 for more information).

In addition, subject clitics can be inverted with the verb in a matrix clause, and de Cat (2005) maintains that inversion is an instance of movement that should only be able to occur with autonomous syntactic elements, not affixes or individual bound morphemes. Thus, the fact that both sentence (57) and (58) are grammatical in French indicates that subject clitics behave like DPs, not agreement markers. Once again, there is debate as to whether or not inversion is still robustly attested in Colloquial French, with de Cat (2005) arguing that it is still found, and Culbertson (2010) claiming that conversational French generally lacks inversion.

(57) Tu aimes les pommes?
 SCL.2SG like.PRES.SG the apples
 'Do you like apples?'

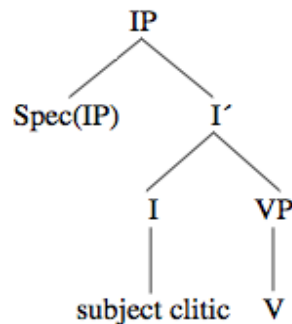
(58) Aimes-tu les pommes?
 like.PRES.2SG-SCL.2SG the apples
 'Do you like apples?'

Therefore, in response to "doubled" constructions, those linguists in favor of the syntactic analysis, specifically de Cat (2005), argue that true subject doubling is not attested in French; instances when a DP or strong pronoun is placed directly before a subject clitic are argued to be examples of displacement of the subject, in the Topic position.

4.2 A Morphological Interpretation

Those that subscribe to a morphological interpretation (Miller 1992; Bonami & Boyé 2007; Culbertson 2010; Legendre et al. 2010) claim that French subject clitics are best analyzed as inflectional markers indicating agreement, and not as syntactic arguments (however, Legendre et al. (2010) and Culbertson (2010) claim that they only behave as such in Colloquial French, as opposed to Standard/Formal French). As inflectional affixes, they would be located in INFL, and not in the canonical subject position, as seen in (59), taken from Culbertson (2010).

(59)



In addition to the general affixal properties that French clitics exhibit, there are additional aspects of French syntax that support a morphological interpretation. Legendre et al. (2010) and Culbertson (2010) argue that *ne* is not a problem for this analysis if this negative element is often dropped in conversation. Despite de Cat (2005)'s claims, Legendre et al. (2010) and Culbertson (2010) found that children in the Lyon corpus (Demuth & Tremblay 2008) often omitted *ne* when they produced a subject clitic. When a DP subject is used, the children included *ne* 83.3% of the time, but when they used a subject clitic, they only included *ne* 6.7% of the time; this is an asymmetry that is not easily explained with the syntactic interpretation (Culbertson 2010).

As previously mentioned, a criticism often lobbied against a morphological approach is the fact that subject clitics may be inverted with the verb. Once again, however, this is only a

problem if inversion is still frequently attested in Colloquial French. Culbertson (2010) found that, in the Lyon corpus (Demuth & Tremblay 2008), a rather insignificant 0.1% of yes/no questions, and only 1.4% of *wh*-questions featured inversion. Similar results have also been found by de Cat (2007) and Coveney (2002).

Perhaps the greatest argument against the syntactic analysis is the frequent use of subject doubling. Those who claim that French subject clitics are syntactic arguments should expect subject doubling to be limited if these constructions are only triggered by pragmatic conditions (i.e. topicalization). Augur (1994), Legendre et al. (2010), and Culbertson (2010), however, have found the exact opposite; subject doubling is quite common in Colloquial French. Legendre et al. (2010) investigated the speech of five French children using CHILDES and discovered that rates of constructions in which a DP and a third person subject clitic were placed to the right and to the left of the verb were incredibly high for all children; Camille used a DP with a third person subject clitic 100% of the time, Pierre 96% of the time, Pauline 81% of the time, Anne 91% of the time, and Grégoire 94% of the time.⁵ In addition, Fonseca-Greber and Waugh (2002) conducted similar corpus analyses and have not found any instances of spontaneous speech in which a strong pronoun is used without a subject clitic.

There is an additional component to Legendre et al. (2010) and Culbertson (2010)'s argument, however. They claim that subject pronouns used to function as pronominal clitics in French, but have evolved so that they are no longer syntactic arguments in Colloquial French; they stipulate that they are nevertheless still analyzed as such in Standard French. The assertion is that subject clitics have transformed to become a class of verbal affixes. This differs from previous claims that French subject pronouns have been simply misanalysed as arguments, and

⁵ However, it should be noted that this analysis determined how often children produced a full DP with a subject clitic, out of all clauses with full DP subjects that they produced, and not how many times a DP preceded a subject clitic, out of all clauses they produced with a subject clitic.

have *always* functioned as affixes (see Miller (1992) and Bonami & Boyé (2007)). It is known that diachronic change is responsible for changes in French verbal morphology, and even the rise of overt subject clitics can be attributed to language change (Legendre et al. 2010; Sprouse & Vance 1999). For instance, Middle French licensed null subjects, but Modern French requires overt subjects in the standard dialect; although the attrition of the inflectional paradigm is not the only catalyst for this change, there is a relationship between overt subjects and verbal forms with less distinguishable inflectional endings (Sprouse & Vance 1999). It seems reasonable to assume that the attrition of the inflectional paradigm could have implications for French syntax based on what is known about language change, and morphophonological attrition in the French language. Nevertheless, the language evolution process is gradual, and it is often difficult to discern the nature of the change as it is occurring (Deutscher 2005). Moreover, while doubling in child French could potentially indicate diachronic change, there is no reason to assume that subject doubling in child French necessitates that the syntax of the adult grammar is transforming. This issue will be addressed in more detail in chapter 7.

4.3 An Alternative Interpretation: The Developmental Hypothesis

The debate over the status of clitic pronouns thus far has been framed as a dichotomy; French subject pronouns are argued to be *either* syntactic arguments *or* as affixes. What has, in my opinion, been overlooked in this discussion is the possibility that children analyze French subject clitics differently than adults do. There has been a lot of emphasis placed on child data to support the notion that French proclitics are behaving like verbal affixes. However, this data could reveal, instead, a stage in the language acquisition process in which French-speaking children produce doubled constructions because they represent the strong pronoun or DP as the

syntactic argument, and the subject clitic as an inflectional affix. This will be referred to as the developmental hypothesis.

The reason for assuming a disconnect between child and adult French is that children are sensitive to the input that they receive, and they seem to be presented with conflicting evidence as to how to interpret subject clitics. The behavior of French proclitics indicates that they are not prototypical examples of either clitic pronouns or affixes following the Zwicky-Pullum criteria. As a result of their hybrid nature, French-speaking children are repeatedly presented with evidence from the input that supports both the syntactic and morphological interpretations. If we adopt the variational model of language acquisition (cf. Yang 2002, 2004), then we may assume that there are actually two distinct representations of subject pronouns (i.e. the argument and affix representations) that are competing with each other in child French.

The variational model is designed to capture the idea of competition between grammars, or parameters, by viewing child language as a "population of hypotheses" that are licensed within Universal Grammar (Yang 2002, 2004; Legate & Yang 2007). The framework of the variational model, then, is still consistent with UG, in specifying that children have access to an innate set of constraints that guide linguistic development and competence. The hypotheses that "compete," and which the child evaluates during the acquisition process, are all permissible and reflect the natural (cross-linguistic) variations that are found in human language. In this respect, Yang (2002) claims that child language and adult language differ, not because the child has an impoverished or imperfect grammar, but because the former reflects variations in UG. The child must determine which variations, or parameters, are most in line with the target grammar. The variational approach represents this process with a statistical model, which assigns all competing grammars a probability. Language acquisition consists in adjusting those probabilities based on

the input. The child is continuously presented with evidence from the input that rewards or punishes any given grammar, even the target grammar. The child will eventually receive enough input that, of all of the competing grammars, one is rewarded more often and associated with the greatest probability; the grammar with the greatest probability "wins out" over the others. This model is represented in (60), which is taken from Yang (2002).

- (60) For an input sentence s , the child
- a. with probability P_i selects a grammar G_i ,
 - b. analyzes s with G_i
 - c. if successful, reward G_i by increasing P_i
otherwise punish G_i by decreasing P_i

The variational model assumes that the transition from one stage to the next is a gradual process, during which several hypotheses are being considered. As Yang (2002), explains, the child must have some confidence in a given hypothesis, so that he does not abandon his confidence in a grammar too easily; this is especially important as the child may be presented with conflicting information as to how the target grammar is characterized. This is certainly the case with French, as there are characteristics of subject clitics that support both the syntactic and the morphological interpretations of them (see chapter 3). As both of these interpretations are possible within UG (i.e. there are languages in which such preverbal elements are classified as clitics and others in which they are classified as affixes), the child is faced with two possibilities. In this case, the child must determine which interpretation is more probable based on the properties of French subject clitics.

The variational model has been useful in explaining early linguistic phenomena, such as Root Infinitives (RI) in child language. Children who are acquiring non-null subject languages pass through a stage in which they produce Root Infinitives (RIs) (Wexler 1998); these children must determine if their language is characterized as [+Tense] (i.e. it overtly marks tense) or if it

is [-Tense]. French is a language that provides relatively minimal evidence for the [+Tense] feature. Most of the present tense forms in French, in fact, reinforce the [-Tense] grammar, as they are either phonologically indistinguishable from each other and resemble bare stems (consider *danse* (1SG) and *danses* (2SG), which are both pronounced as the stem *dans-* [dã]), or they are indistinguishable from the infinitive or the past participle (consider *dansez* (2PL), *danser* (INF) and *dansé* (PP), all pronounced [dãse]) (Legate & Yang 2007). French children pass through an RI stage, and must determine if their language marks tense. An interesting component of the French RI stage is that children never use clitic pronouns with RIs. This has been taken as an indication that "subject clitics and weak pronouns are licensed by the *agreement feature* (emphasis added)" (Guasti 2002).

Interestingly, French-speaking children's knowledge of tense may factor into their production of subject doubling, which in turn may also be explained by the variational model of language learning. French-speaking children associate subject clitics with verbal agreement, as they only produce clitic pronouns with finite verbs, whereas strong pronouns may be used with both finite and nonfinite verbs (Guasti 2002). If children have learned that tense must be overtly specified, and associate the clitic with verbal agreement, they may represent these pronouns as verbal affixes. As they pass from the RI stage to a stage in which they have acquired more of the adult morphosyntax, it is possible that they may still interpret the subject clitic as an indication of finiteness.

The developmental hypothesis assumes that subject clitics are arguments in adult French and, as in the syntactic analysis proposed by de Cat (2005, 2007), that strong pronouns and full DPs before subject clitics are dislocated subjects (or objects); this is the only possible explanation of them if the clitic is in fact the argument of the verb, and not an affix. This

alternative hypothesis differs, however, in that it predicts that child French differs from adult French in regard to the classification of subject clitics. This hypothesis predicts that children, having categorized subject clitics as affixes, will therefore represent strong pronouns and DPs that precede them as syntactic arguments.

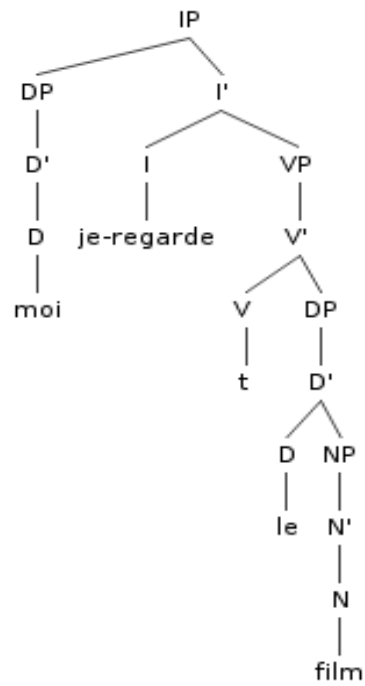
This hypothesis assumes that adult French is a non-null subject language, and that the children in this corpus are past the early null subject stage associated with child language; this assumption is based on the high rates of subject doubling in child French, which will be presented in chapter 5. If children believe that French is a non-null subject language, but fail to represent clitics as syntactic arguments, they may search for an overt subject. Consequently, they may include a strong pronoun or full DP before the subject clitic, as the syntactic argument instead, and create a doubled construction as a result. In other words, if children represent subject clitics as verbal affixes, they may include a strong pronoun or other full DP to satisfy the Extended Projection Principle (EPP). However, it should be noted that it is difficult to determine whether or not French-speaking children assume that French is a non-null subject or a null subject language.⁶ It is possible that children continue to assume that French is a null-subject language, and produce doubled constructions only when they want to include an overt subject. This alternate theory will be discussed in more detail in the discussion, in chapter 7. For now, the former hypothesis will be adopted and it will be assumed that children are motivated to produce doubled constructions in order to comply with the EPP.

⁶ It should be mentioned that Pierce (1989) considers early null subjects in French to correspond to finite verbs without a subject clitic (or a full DP). However, if French-speaking children perceive subject clitics as affixes, this stage may be better characterized as part of the RI stage, or a stage when neither TNS nor AGR is marked in child French. The production of doubling may actually reveal instead when they have learned that an overt subject is required. Again, however, it is difficult to pinpoint when the shift in representation may have occurred based on production alone.

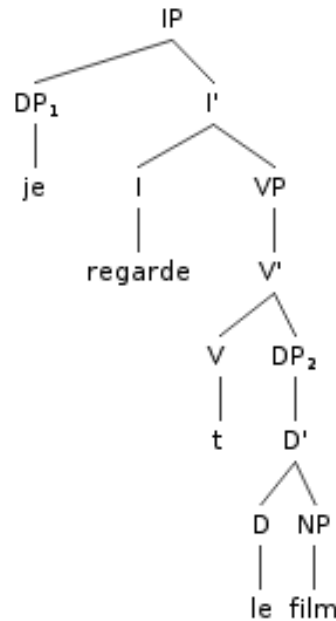
Nevertheless, in either case, both of the competing grammars are expected to influence child French. The transition between an initial state and the target grammar is supposed to be gradual, and this competition between grammars is expected to result in the production of forms consistent with both the child and the adult (target) grammar. This implies that children may occasionally represent subject clitics as arguments, and thus that children are not expected to produce subject doubling 100% of the time. This is the same reason that children produce both RIs and finite verb phrases during the RI stage. In other words, there is every reason to expect "competition" between forms in child French.

This hypothesis assumes, consequently, that when the child analyzes the subject clitic as an argument, he will not include a strong pronoun or full DP beforehand because the EPP will already be satisfied by the clitic pronoun. In other words, children will often produce phrases that resemble (61), where the strong pronoun is the argument in [spec, IP], and the clitic is found in I with the verb, which has undergone verb raising (hence the trace in V). However, they will at times produce phrases that resemble (62), where the clitic is the argument, in [spec, IP] and the strong pronoun is not required.

- (61) Moi je regarde le film.
 PRON.1SG SCL.1SG watch.PRES.1SG the film
 'Me I am watching the film.'



- (62) Je regarde le film.
 SCL.1SG watch.PRES.1SG the film
 'I am watching the film.'



If *ne*-retention and subject-verb inversion are in fact on the decline in adult Colloquial French, as Legendre et al. (2010) and Culbertson (2010) claim, then this indicates that the child is presented with less consistent evidence that the subject clitic is acting as an argument and not an affix. Additionally, left-dislocation may also reward the affixal interpretation, as the child may misinterpret the function of the strong pronoun or full DP before the clitic pronoun in these constructions. However, because this hypothesis expects that the adult produces rates of doubling that are lower than those produced by the child, the latter will encounter numerous examples of the subject pronoun in isolation, without a strong pronoun or full DP. These observations will punish the affixal interpretation, and reward the grammar that represents clitic pronouns as syntactic arguments. Since the child understands that an overt subject is required at this stage, he is forced to re-analyze his representation of subject clitics so that the clitic pronoun is treated as

the argument instead. After the target grammar is assigned the greatest probability, and children learn that subject pronouns are clitic pronouns in adult French, it is predicted that they will only produce doubled (i.e. dislocated) constructions when they are licensed by pragmatics.

4.4 Summery of Theoretical Questions and Competing Hypotheses

As indicated, the objective of the research to be presented here is to analyze the status of subject clitics, by researching the production of subject doubling, *ne*-retention, and subject-verb inversion, in child and adult French with the Palasis corpus found on CHILDES. There are three competing hypotheses concerning the production of subject clitics by the children in this corpus, each based on the interpretation (syntactic, morphological, or developmental) that is adopted.

Hypothesis (1)- Syntactic Interpretation: Subject clitics are syntactic arguments. It is predicted that children and adults will produce a similar, or equivalent rate, of subject doubling. These rates should also be relatively low if strong pronouns and DPs are dislocated subjects, and not obligatory thematic arguments. Both inversion and negation with *ne* should be attested.

Hypothesis (2)- Morphological Interpretation: Subject clitics are inflectional affixes. This hypothesis predicts that the children and the adult will have equivalent rates of doubling and that this rate will be elevated. Moreover, subject doubling is not only expected, but seemingly required if the categorization of the subject clitic as an affix would otherwise result in *pro* being placed in [spec, IP], which is not allowed in French. Legendre et al. (2010) claim, however, that modern French is transforming into a null subject language; this is how they explain why not all subject clitics are doubled by a strong pronoun or DP in child and adult French. If French is, as generally assumed, a non-null subject language, subject doubling is expected all of the time. However, if it is a null subject language, as Legendre et al. (2010) suggest, then doubling is not expected all of the time, but is the result of the inclusion of an overt subject. Regardless of the

specific interpretation adopted, children and adults should be producing relatively equal rates of doubling; the exact rate may be dependent on the classification of French as a non-null subject or null subject language, however the overall production by the children should nevertheless correspond to the target grammar. It is also predicted that neither inversion nor negation with *ne* will be regularly attested.

Hypothesis (3)- Doubling as a Stage in Development: Subject clitics are initially analyzed as affixes in child French, whereas subject clitics are arguments in adult French. French-speaking children are expected to produce higher rates of strong pronouns and DPs before subject clitics, and the contrast between their rates and those for the adult is expected to reach significance. Accordingly, it is also predicted that French-speaking children in this corpus will have low rates of *ne*-retention and subject-verb inversion compared to those same rates for the adult; this contrast should, again, be significant. However, because there are two competing grammars, both influencing child French, the rates of doubling will not be at ceiling. For this same reason, they may retain *ne* and invert the subject and the verb at times, just as in adult French.

CHAPTER 5: CORPUS ANALYSIS #1: SUBJECT DOUBLING IN CHILD FRENCH

The first analysis presented here is an attempt to determine if French-speaking children are producing doubled constructions, and if so, if they are producing these constructions more often than adults. To my knowledge, there has not been any research conducted on this topic with the Palasis corpus (Palasis 2010), and it is this corpus that I will be using to evaluate claims of subject doubling in child French. In addition, much of the focus of previous research has been on DPs before clitic pronouns, and consequently on the third person. This research will analyze the first, second and third person subject clitics.

5.1 Palasis Corpus and Subjects

For the purpose of this analysis and the next, the Palasis corpus found on CHILDES will be used (MacWhinney 2000; Palasis 2010). This corpus contains 121 files, but nine of the files had no transcript, so those were excluded from the analysis. Therefore, a total of 112 files were included in this research. The Palasis corpus features twenty-two children, from the same preschool class in the South of France, and three adults with whom they interacted during the recorded sessions. However, the speech of only one adult, Katerina, was analyzed because the other two adults rarely produced any utterances. Two of the children are not native French speakers (Rita and Eliza), and their speech was excluded from the analysis as well. The corpus also lists UNI (child) as a participant in some of the files in this corpus. This does not refer to an additional child, but refers to one of the twenty-two children in the corpus who could not be identified for some reason; as it is not known which child this label is picking out (and presumably this information could not be gathered at the time the corpus was being transcribed),

the speech from UNI was also excluded. The children were recorded for approximately twenty hours over the course of thirteen sessions from November 2006 to June 2007. The children range in age from 2;05 to 3;09 over the course of the recordings, with some children being slightly older than others by a few months. The speech in these files is conversational, and consists of interactions between the children and Katerina.

5.2 Coding

The focus of this analysis is on the production of strong pronouns, full DPs, and subject clitics, both in isolation (as in (63)) and in "doubled" constructions (as in (64) and (65)).

- (63) **Je** cours.
SCL.1SG run.PRES.1SG
'I run.'
- (64) **Moi je** cours.
PRON.1SG SCL.1SG run.PRES.1SG
'I run.'
- (65) **Michel il** aime le foot.
Michel SCL.3SG like.PRES.3SG the football (soccer)
'Michel he likes soccer.'

In order to find any and all instances of strong pronouns, DPs, and subject clitics in this corpus, I hand-coded all of the files that I used for this research. I decided to restrict this research to singular pronouns, full DPs, and subject clitics, as the children rarely produced plural subjects. It should also be noted that because the subject clitic *on* is used in conversational French as a first person plural pronoun, it was also excluded from the analysis to be consistent. This limited the original corpus to utterances involving the following subject forms, outlined in Table 6, along with any full DPs.

Table 6 Strong Pronouns and Subject Clitics

Person	Strong Pronoun	Subject Clitic
First	Moi	Je
Second	Toi	Tu
Third (M)	Lui	Il
Third (F)	Elle	Elle

After the files were coded, I performed CLAN searches to find and record doubled and non-doubled constructions, i.e. subject clitics with and without either a strong pronoun or DP beforehand. Moreover, only the utterances that feature a strong pronoun or DP *directly* before the subject clitic were considered to be doubled constructions. Therefore, if any material interceded between the strong pronoun or full DP and the subject clitic, the utterance would be taken as a non-doubled utterance. For example, (66) is not considered an instance of doubling, but of the clitic in isolation.

- (66) **Moi,** alors, **je** veux le livre.
 PRON.1SG well SCL.1SG want.PRES.1SG the book
 Me, well, I want the book.

In addition, I examined the utterances that featured strong pronouns, full DPs, and subject clitics and disregarded any that matched the following descriptions, found in (67-72):

- (67) *The pronoun before the subject clitic is ambiguous.*

More specifically, if it could not be determined through context whether the pronoun that preceded the subject clitic should be classified as an object pronoun or a strong subject pronoun, the utterance in question was discarded. The context was generally helpful in finding the correct interpretations, but there were cases where such ambiguity could not be resolved. An example of such ambiguity is found in (67a). This phrase could be translated as either (67b) or (67c). If, as is assumed in this example, context does not support either interpretation, then it must be excluded, as it is not clear whether doubling is intended or not.

(67a) Attends moi je veux finir l'histoire.

(67b) Attends, moi je veux finir l'histoire.
 wait.PRES.1SG PRON.1SG SCL.1SG want.PRES.1SG finish.INF the-story
 'Wait, me I want to finish the story.'

(67c) Attends-moi, je veux finir l'histoire.
 wait.PRES.1SG-PRON.1SG SCL.1SG want.PRES.1SG finish.INF the-story
 'Wait for me, I want to finish the story.'

(68) *The subject clitic is preceded by an unknown element, which is represented by X's in the transcripts.*

The subject clitics in this case may or may not have been preceded by a strong pronoun or full DP, and because this information could not be ascertained with any certainty, they were discarded. An example, taken from the corpus, is found in (68a). An exception, however, comes from (68b), in which the unknown element is the name of a town, and thus it is known that the strong pronoun 'moi' is not the element in question.

(68a) xxx il [le requin] nous fait mal. (NIN, 2-7).
 SCL.3SG [the shark] OCL.1PL make.PRES.3SG bad
 'xxx it [the shark] hurts us.'

(68b) Ben à xxx [= town] [/] j'ai été à Paris. (WIL, 13-48a).
 uh at xxx [= town] [/] SCL.1SG-have.PRES.1SG was.PP at Paris
 'Uh at xxx [= town] [/] I was in Paris.'

However, if the strong pronoun is preceded by an unknown element, it was still included in the calculations, unless the context is in some way ambiguous (as explained in (69)).

(69) *The strong pronoun, DP, or subject clitic is part of a quotation.*

(70) *The strong pronoun, DP, or subject clitic is being perseverated as the child or adult is in the process of finishing his or her utterance.*

In other words, if the child or the adult was "stuttering," starting and stopping within the same phrase, any of the strong pronouns, DPs, and subject clitics in the phrase that were repeated due

to this perseveration were only counted once. Thus, in (70a), only one instance of the subject clitic would be included in the calculations.

- (70a) Tu as... Tu as le livre.
 SCL.2SG have.PRES.2SG SCL.2SG have.PRES.2SG the book
 'You have...you have the book.'

However, if a child or the adult repeated the entire clause (no perseverating), then each utterance was included and counted individually. I elected to include repetitions because it is natural for children and adults to repeat themselves in the course of a conversation. An example from the corpus of a repetition that was included in the analysis is found in (70b).

- (70b) J'ai peur. J'ai peur. (ENZ, 7-27b)
 SCL.1SG-have.PRES.1SG fear. SCL.1SG-have.PRES.1SG fear
 'I'm scared. I'm scared.'

- (71) *The DP is a dislocated object.*

The placement of a dislocated object before a subject clitic resembles doubled structures, but are not actually instances of subject doubling. In this case, the DP object is not a repetition of the subject clitic. As far as I know, these instances of dislocation are not disputed; the morphological analysis does not claim that dislocation is not possible in French. An example of an utterance with a dislocated object is found in (71a). In this case, it is known that the DP is a dislocated object because it corresponds to the object pronoun, and not the subject of the clause.

- (71a) Le pull il l'a mis. (KAT, 4-16)
 the sweater SCL.3SG OCL- have.3SG put-on.PP.
 'The sweater he put it on.'

- (72) *The subject clitic is an expletive subject.*

Because there is no thematic subject associated with the constructions that make use of these "dummy" pronouns, doubling should not be possible (at least in adult French). Including them in the analysis, then, could potentially bias the results so that the number of possible non-doubled constructions is higher, as expletive pronouns are not expected to be doubled.

However, all other instances of subject clitics, either with or without a strong pronoun or DP beforehand, were deemed to be relevant and included in the results.

5.3 Analysis

After all of the searches on CLAN were performed, and any utterances that met the aforementioned criteria were discarded, I was left with a considerable sample of subject clitics to analyze for doubling. Table 7 lists the total number of tokens of first, second, and third person masculine and feminine subject clitics, doubled and non-doubled, taken from the Palasis corpus.

Table 7 Corpus for Analysis #1

	First Person	Second Person	Third Person (Masc.)	Third Person (Fem.)
Children	2368	531	1469	413
Adult	507	2684	519	369

Through the use of the program CLAN, I calculated the number of times each child and adult produced the first, second, and third person subject clitic, with and without a strong pronoun or DP, for every file that had been included in this research. I recorded these counts for each individual and each file. The number of tokens of subject clitics, either isolated or doubled, that I recorded were then totaled for each individual. The same counts for the adult were calculated following the same methods. The rates of doubling were determined by taking the number of doubled constructions per subject clitic (i.e. first, second, third) and dividing that by the total number of tokens of that particular subject clitic. The rates for the children were compared to those found for the adult. Lastly, these results were subjected to statistical analysis; I performed one-sample t-tests to compare the proportion of doubled constructions that the children produced to the proportion of those same constructions produced by the adult, Katerina. The proportion produced by the adult is treated as a fixed value for the purpose of this analysis,

and serves as the null hypothesis; that is, if the children are behaving like Katerina, they should produce an average proportion of doubled constructions that is around the same as hers. If the proportion produced by the children is significantly different (as determined by the p -value), then they are not behaving like her. This finding would confirm the alternate hypothesis, then, that children are producing doubling at a rate that is statistically different from the adult.

5.4 Results

Overall, the results of this analysis reveal that the children in the Palasis corpus produced strong pronouns or full DPs with subject clitics more often than the adult, Katerina. The children produced doubled constructions around 26% of the time, whereas the adult did so only around 5% of the time, as is found in Table 8 below. The contrast in these rates is statistically significant ($t=12.7537$, $p < 0.001$).

Table 8 Overall Rates of Doubling

	Non-Doubled Subjects	Doubled Subjects	Total	Rate of Doubling
Children	1256	3,537	4,793	26.2%
Adult	231	4,141	4,372	5.3%

The individual rates for the children are found below in Table 9. There is some variation, but the rates of doubling produced by the children are all consistently higher than the rate produced by the adult. The highest rate of subject doubling was produced by Victor (VIC), with a rate of 42%, and the lowest was produced by Lisa (LIZ), with a rate of 12%. The range for the children's rates is 30%.

Table 9 Children's Overall Rates of Doubling

Child	Doubled Subjects	Non-Doubled Subjects	Total	Rate of Doubling
CAR	4	12	16	25%
LUS	183	566	749	24%
KLO	32	125	157	20%

MAS	63	153	216	29%
LAN	18	94	112	16%
MAI	102	378	480	21%
SAR	51	106	157	32%
NIN	153	416	569	27%
VIC	129	177	306	42%
LSN	50	77	127	39%
LIN	38	93	131	29%
ELE	14	36	50	28%
ENZ	51	119	170	30%
KEL	27	63	90	30%
LOU	7	30	37	19%
LIZ	6	43	49	12%
KLE	10	19	29	34%
MAT	101	221	322	31%
WIL	135	538	673	20%
DYL	82	271	353	23%

However, the analysis also highlighted noticeable person effects; the children's rate of subject doubling with the first person and third person masculine is noticeably different (i.e. higher) than the adult's rate, but both the children and the adult have a similarly low rate of doubling with the second person. Interestingly, the rate for the third person feminine is high for both the children and for Katerina; this elevated rate for Katerina appears to be an anomaly, as her rates of doubling with other persons are consistently low.

5.4.1 First Person Singular

The rate of strong pronouns before subject clitics for the children in this corpus is around 38%, but the rate for Katerina is just below 10%. The results for the production of first person subject clitics with and without strong pronouns are found in Table 10. The difference in production rates between them is statistically significant ($t = 12.576, p < 0.0001$).

Table 10 Average Rates of Doubling with the First Person

	Moi Je	Je	Total	% of 'Moi Je'
Children	896	1478	2374	37.7%
Katerina (KAT)	49	459	508	9.6%

There is variance between the children in the corpus, as illustrated in Table 11. The children with the highest rate of doubling are Lou (LOU) and Lucien (LSN). They produce constructions in which the strong pronoun precedes the subject clitic 54% of the time. The child with the lowest rate is Lisa (LIZ), with a rate of 21%. The range for these rates, among the children, is 33%. Even the lowest rate produced by the children (21%) is much higher than that for Katerina. This suggests that children are behaving differently than the adult in regard to production of first person pronouns and subject clitics.

Table 11 Children's Individual Rates of Doubling with the First Person

Child	Moi Je	Je	Total	Rate of Doubling
CAR	3	7	10	30%
LUS	138	230	368	38%
KLO	17	15	32	53%
MAS	43	56	99	43%
LAN	12	33	45	27%
MAI	57	128	215	27%
SAR	40	50	90	44%
NIN	93	181	274	34%
VIC	120	110	230	52%
LSN	45	39	84	54%
LIN	22	21	43	51%
ELE	6	15	21	29%
ENZ	39	48	87	45%
KEL	19	22	41	46%
LOU	7	6	13	54%
LIZ	5	19	24	21%
KLE	10	13	23	43%
MAT	72	99	171	42%
WIL	85	265	350	24%
DYL	63	121	184	34%

5.4.2 Second Person Singular

Neither the children nor the adult produced a strong pronoun before the second person singular pronoun often. The contrast in rates of doubling for the second person is not significant. In fact, the children produced only 26 tokens of the strong pronoun- subject clitic combinations, which comprise less than 5% of their utterances in the second person. Katerina produced 70 tokens of this same construction, but she produced a total of 2,620 utterances featuring the second person. These results are found in Table 12. The rate of strong pronouns before subject clitics for both the children and adults is low, below 5%, and indeed children's production is not statistically significant ($t = 0.6624$, $p = 0.5157$).

Table 12 Average Rates of Doubling with the Second Person

	Toi Tu	Tu	'Toi Tu' + Tu	% of 'Toi Tu'
Children	26	507	533	4.9%
KAT	70	2620	2690	2.6%

As previously mentioned, Katerina used the second person more often than the children, but the rate of doubling for all children are actually quite similar to hers (2.6%). There are, however, three children who had elevated rates of doubling for the second person compared to the rest of the children: Sara (SAR), with a rate of 17%, Enzo (ENZ), with a rate of 32%, and Mathilde (MAT), with a rate of 14%. Nevertheless, the overall rate for doubled constructions in the second person is low, suggesting that doubling with the second person may not be common. The range is 32%, as the highest rate is 32% and the lowest is 0% (no doubling). If the three highest proportions are treated as outliers and excluded, then the range is only 6%.

Table 13 Children's Individual Rates of Doubling with the Second Person

Child	Toi Tu	Tu	Total	Rate of Doubling
CAR	0	1	1	0%
LUS	1	66	67	1%

KLO	2	33	35	6%
MAS	0	9	9	0%
LAN	0	7	7	0%
MAI	4	45	49	8%
SAR	3	15	18	17%
NIN	1	43	44	2%
VIC	1	30	31	3%
LSN	0	10	10	0%
LIN	0	29	29	0%
ELE	0	2	2	0%
ENZ	7	15	22	32%
KEL	0	15	15	0%
LOU	0	9	9	0%
LIZ	0	3	3	0%
KLE	0	0	0	0%
MAT	5	32	37	14%
WIL	1	92	93	1%
DYL	1	51	52	2%

5.4.3 Third Person Masculine Singular

The analysis of the corpus also revealed that children produce an elevated rate of strong pronouns and full DPs before the third person masculine singular subject clitic compared to Katerina. Their rate of strong pronouns with the subject clitic is low (3.3%), but the rate of full referential DPs before the subject clitic is much higher (12.1%); in both cases, however, their rate is significantly different from that for the adult ($p < 0.01$). The rates for these constructions are found in Table 14 and Table 15. The rate of strong pronouns *or* full DPs before the third person masculine subject clitic is, of course, even higher at almost 15% ($t = 2.9161$, $p < 0.001$); the results for all doubling are found in Table 16. The children in this corpus produce these constructions more than twice as often as the adult, both when using strong pronouns and when using full DPs.

Table 14 Average Rates of Doubling with the Third Person Masc. (Strong Pronoun + Clitic)

	Lui II	II	Lui II + II	% of 'Lui II'
Children	43	1252	1295	3.3%
KAT	2	767	769	0.3%

Table 15 Average Rates of Doubling with the Third Person Masc. (DP + Clitic)

	DP II	II	DP II + II	% of 'DP II'
Children	178	1252	1430	12.4%
KAT	38	767	805	4.7%

Table 16 Overall Rates of Doubling with the Third Person Masculine

	Lui/DP II	II	Lui/DP + II	% of 'Lui/DP II'
Children	221	1252	1473	15%
KAT	40	767	807	5%

Once again, there is variation among the children, with some children producing zero instances of doubling with the third person masculine (see Table 17). However, out of the 20 children included in this analysis, 17 of them produced doubled constructions. In addition, all but four of the children in the Palasis corpus produced a rate of doubling that is greater than that produced by Katerina. Lina (LIN) produced the highest overall rate of doubling with the third person (31%), while her peers Carla (CAR), Lou (LOU), and Chloé (KLE) produced the lowest rate, 0%. The range then is 31%. Some of the children in this corpus produced rates more than five times as great as Katerina's rate of 5%.

Table 17 Children's Individual Rates of Doubling with the Third Person Masculine

Child	DP/LUI IL	IL	Total	Rate of Doubling
CAR	0	0	0	0%
LUS	29	221	250	12%
KLO	12	72	84	14%
MAS	16	70	86	19%
LAN	5	51	56	9%

MAI	23	178	201	11%
SAR	5	31	36	14%
NIN	31	154	185	17%
VIC	2	24	26	8%
LSN	3	23	26	12%
LIN	9	20	29	31%
ELE	4	12	16	25%
ENZ	2	44	46	4%
KEL	6	22	28	21%
LOU	0	13	13	0%
LIZ	1	20	21	5%
KLE	0	6	6	0%
MAT	15	56	71	21%
WIL	45	154	199	23%
DYL	13	81	94	14%

5.4.4 Third Person Feminine Singular

The use of strong pronouns and full referential DPs before third person feminine singular subject clitics is particularly revealing. Neither the children nor Katerina preferred to include a strong pronoun before the subject clitic. Katerina did not include the strong pronoun before the third person feminine subject clitic, and only three tokens could be found for the children in the entire corpus. These results are found in Table 18. As neither the children nor the adult produced these constructions often, the contrast in the rates of production for the children and Katerina is not significant ($t = 0.5962, p > 0.005$).

However, surprisingly, both the children and the adult produced full DPs before feminine subject clitics often; the children produced these doubled constructions 26.8% of the time, and Katerina produced them 19.6% of the time. These rates, which are found in Table 19, are even more elevated than the production of DPs before masculine subject clitics. The high rate for Katerina is also interesting because it stands out in comparison to her rates of doubling for the first person (9.7%), second person (2.6%), and third person masculine (6.4%), all of which are

below 10%. Her production of doubled constructions with the third person feminine is almost double that of her production with the first person, her next highest rate of doubling. This result is unexpected if subject doubling is associated with a stage in language acquisition. Because the rates for the children and the adult are so similar, the contrast in production rates is not statistically significant. The total rates of doubling, that is the total rate utterances with a strong pronoun or a DP before the third person feminine subject clitics, is found in Table 20.

Table 18 Average Rates of Doubling with the Third Person Fem. (Strong Pronoun + Clitic)

	Elle Elle	Elle	Elle Elle + Elle	% of 'Elle Elle'
Children	3	300	303	1%
KAT	0	295	295	0%

Table 19 Average Rates of Doubling with the Third Person Fem. (DP + Clitic)

	DP Elle	Elle	DP Elle + Elle	% of DP Elle'
Children	110	300	410	26.8%
KAT	72	295	367	19.6%

Table 20 Overall Rates of Doubling with the Third Person Feminine

	Elle/DP Elle	Elle	Elle/DP Elle + Elle	% of Elle/DP Elle'
Children	113	300	413	27.4%
KAT	72	295	367	19.6%

As is expected, there is variation among the children in regard to doubling with the third person feminine, as is found in Table 19. There are three children who did not produce any examples of subject doubling, but these children produced two or fewer utterances containing the third person feminine, so the Palasis corpus may not provide a representative sample for these children. There is still some variation among the rest of the children, nevertheless, with how often each of them produced doubled constructions. The highest rate comes from Nina (NIN),

who produced them 42% of the time. The range among the children is 42%, but if the lowest rate of 0%, produced by those three children, is ignored as an outlier, then the range is 29%. Table 21 also illustrates that many of the children are producing rates close to Katerina's rate of 19.6%, but some are doubling with the third person feminine considerably more often. Overall, however, rates of production are rather equivalent, and the children do not appear to be behaving differently than the adult in this respect.

Table 21 Children's Individual Rates of Doubling with the Third Person Feminine

Child	DP/ELLE ELLE	ELLE	Total	Rate of Doubling
CAR	1	4	5	20%
LUS	15	49	64	23%
KLO	1	5	6	17%
MAS	4	18	22	18%
LAN	1	3	4	25%
MAI	18	27	45	40%
SAR	3	10	13	23%
NIN	28	38	66	42%
VIC	6	13	19	32%
LSN	2	5	7	29%
LIN	7	23	30	23%
ELE	4	7	11	36%
ENZ	3	12	15	20%
KEL	2	4	6	33%
LOU	0	2	2	0%
LIZ	0	1	1	0%
KLE	0	0	0	0%
MAT	9	34	43	21%
WIL	4	27	31	13%
DYL	5	18	23	22%

5.5 Discussion

These results indicate that the children in the Palasis corpus exhibit doubling more often than the adult, but not categorically. There are some noticeable person effects. Interestingly, the

rates of doubling with the second person are low for the children and the adult. The children's production of doubling for the first person (37.7%) is rather elevated in comparison to their rates of doubling with other persons, and the rate of doubling with the third person feminine strong pronoun is low for both the children and the adult. These observations will be discussed in turn.

The rates of doubling with the second person are rather low for the children and the adult, as compared to rates for other persons; in fact, both the children and the adult produce the doubled construction less than 5% of the time. The low rate for the adult is not surprising if the clitic pronoun is indeed a dislocated subject in topic position, but the low rate for the children is unexpected if they represent the clitic as a verbal affix. It could be that children have an adult-like representation for second person subject clitics, but consider all other clitic pronouns to be affixes.

In regard to the first person, the children's rate of doubling with first person is not only noticeably higher than Katerina's, but is also higher than their rates of doubling with the second and third person. Doubling with the first person may be influenced by children's treatment of the first person in general. It has been found that English-speaking children produce the first person singular pronoun before any other subject pronoun, and produce it more often (Raskin & Shaw 1988). In this corpus, the children produce the first person more often than they produce any other subject pronoun; in fact, they produce almost as many tokens of the first person singular (2,376) as the total for all tokens of the other subject pronouns combined (2,413). Moreover, the elevated rate may also be connected to the conversational nature of the speech in this corpus. The children produce 2,376 tokens of the first person, and Katerina produces 2,684 tokens of the second person; these numbers suggest that the adult is guiding the conversation with the children, and is primarily talking to them. The rate of doubling then could be influenced by these

two factors, namely the frequency of the first person in child speech and the nature of the exchange between the children and the adult in the corpus.

The low rates of doubling with the third person feminine strong pronoun (*elle + elle*) are perhaps not that surprising, considering that the third person feminine strong pronoun and subject clitic are homophonous. The fusion of two homophonous forms is fairly common in affixal morphology, and this process is referred to as haplology (S & L 2012). An example of this process, provided by Spencer and Luís (2012) comes from Turkish. In Turkish, the plural affix (*-ler*) and the possessive affix (*-ler*) are homophonous; these forms are never found together. Possessive plural nouns are only marked with this affixal form once. A similar process could be happening with the third person feminine in French. If haplology is found in French, then it is impossible to distinguish how many of the third person feminine subject clitics are actually doubled. The phonological coalescence of these two forms may thus explain the divide between doubling with the masculine and doubling with the feminine subject clitics. It could be that rates of 'elle elle' are obfuscated by this phonological process. It is impossible to prove if this is happening, but this process, which would explain why the third person feminine subject pronoun is somehow different than the other clitics, has considerable cross-linguistic support.

Overall, these results provide some support for the idea that French-speaking children represent clitics differently than adults do. The children produced doubled constructions more often than the adult. Neither the syntactic analysis, nor the morphological analysis, claims that children are behaving differently than adults in their treatment of clitic pronouns, but these results show that there is a noticeable difference in the rates of doubling, and that this contrast is indeed significant for the first and third person masculine. These results, consequently, challenge the "argument or affix" dichotomy that has been the source of debate. If no difference exists

between child and adult French, these results are rather hard to explain; in other words, if the children have an adult-like representation of clitics, regardless of the status of these pronouns, why would they be producing doubled constructions considerably more often than the adult?

Of course, the increased rate of doubling alone does not in and of itself categorically support any of the proposed hypotheses. Consequently, I have conducted the following analysis to further investigate how the children in this corpus represent subject clitics.

CHAPTER 6: CORPUS ANALYSIS #2: SYNTAX OF CHILD FRENCH

The intent of the second corpus-based analysis is to examine the syntax of child French, focusing on two aspects of French syntax, negation and inversion. These syntactic phenomena were chosen because they have been treated as "litmus tests" for the function of French subject clitics (see chapter 4) (cf. Culbertson 2010; de Cat 2005; Legendre et al 2010). As previously mentioned, low rates of *ne*-retention and inversion would support the morphological interpretation, as the subject clitic should not be separated from the verb or other verbal affixes.⁷ Conversely, if *ne*-retention and inversion are robustly attested in this corpus, then the syntactic analysis is supported. While Culbertson (2010) has found evidence for low rates of both in the Lyon corpus (Demuth & Tremblay 2008), I am unaware of any attempts to extrapolate this information from the Palasis corpus. This analysis will attempt to investigate the syntax of these children to see if their use of *ne*-retention and inversion reveals how they represent subject clitics.

6.1 Palasis Corpus and Subjects

The Palasis corpus is once again the focus of this research; the same children and adult have been included in this study.

6.2 Negation

The first part of this analysis is focused on negation with and without *ne* (see examples (73-74) in both the children's and the adult's speech.

⁷ This is assuming that object clitics are verbal affixes as Legendre claims (personal communication, November 2013).

- (73) Je **ne** veux **pas** une pomme.
 SCL.1SG NEG want.INF not an apple
 "I do not want an apple."
- (74) Je veux **pas** une pomme.
 SCL.SG want.INF not an apple
 "I do not want an apple."

As stated previously, the syntactic and morphological analyses predict opposing grammars: one that makes use of the *ne*-marker and one that does not. The absence of *ne* implies that negation is signaled with *pas* alone. The developmental hypothesis, however, predicts that rates of *ne*-retention for the children will be much lower than that of the adult; this would be expected if child and adult French differ in how the subject clitic is represented, with children conceiving of it as a verbal affix denoting agreement, and adults representing it as a syntactic argument (as it is traditionally described in the grammar).

6.2.1 Coding

To calculate the rates of *ne*-retention for the children and the adult, I searched through the Palasis corpus via CLAN for all instances of negation with the post-verbal marker *pas*, with and without *ne* before the verb.⁸ All negated phrases that featured a finite verb and a subject in the form of either a subject clitic, DP, or "doubled" subject were included in this analysis. Negated non-finite verbs are preceded by *pas*, but are not encased between *ne...pas*, and were not of interest. If an utterance did not contain *both* an explicit syntactic argument as a subject of the phrase and a finite verb it was discarded from the analysis. Therefore, any utterances in which there was a subject, negation, but no verb (as in 75) were necessarily excluded. Those in which there was a verb, but no subject were also excluded. An example of such an utterance taken from the corpus is found in (76).

⁸ The rates of negation with other post-verbal markers such as *jamais*, *personne*, etc., were not calculated, but, at least impressionistically, negation seemed to be primarily formed with *pas* in this corpus.

(75) **On ne....** (KAT, file 5-22)

(76) Nan veut pas. (MAT, file 9-34b)
nope want.PRES.3SG not
'Nope (I) don't want.'

Accordingly, negated imperatives, like (77) are not included.

(77) Ne touche pas.
NEG touch.PRES.3SG not
'Don't touch.'

Of course, if there was no subject or verb, the utterance was also discarded. An example of this is found in (78).

(78) Pas là. (KLO, file 2-7).
not there
'Not there.'

6.2.2 Analysis

After the necessary discards were made, I was left with the corpus in Table 22.

Table 22 Corpus Size for Analysis of *Ne*-Retention

	Total Number of Negated Expressions
Children	966
Katerina	703

Once again, through the use of CLAN, I calculated how often the children retained *ne* in negated expressions and how often they did not. This was accomplished by recording the number of negated expressions with and without *ne* per file per child. Then, the total number of phrases with *ne* and without it was calculated for each individual child; these totals were then added together to arrive at the overall number of negated phrases with and without *ne* for the children as a group. The same calculations were performed for the adult, so that the children's production and adult's production could be compared. In order to determine statistical significance, a one-sample t-test was then applied. Just as in the previous analysis, this involved comparing the

proportion (of *ne*-retention in this case) for the children as a group to that for the adult. The null hypothesis predicts that the rate for the children and the adult is roughly the same, whereas the alternate hypothesis predicts that there is a difference in rates.

6.2.3 Results

While both the children and the adult produce a low rate of *ne*-retention, the results of this analysis indicate that there is a substantial difference between their rates. The children in the Palasis corpus include *ne* in less than 1% of all negated utterances, whereas the adult includes it almost 8% of the time (see Table 23). The one-sample t-test confirms that children's production is in fact significantly different from the adult's production ($t = 16.6814$, $p < 0.0001$).

Table 23 Rates of *Ne*-Retention

	Negation with 'Ne'	Negation without 'Ne'	Total	Percentage of Ne- Retention
Children	8	958	966	0.8%
Katerina	55	648	703	7.8%

6.3 Inversion

The second part of this analysis is designed to explore subject-verb inversion in child and adult French. The same methods described in the first part of the analysis, concerning negation, will be applied to determine how often the children in the Palasis corpus, and Katerina, invert the subject with the verb and how often they do not when producing interrogative expressions. See (79) for an example of an interrogative without inversion, and (80) for that same expression with inversion.

- (79) Tu aimes la musique?
 SCL.2SG like.PRES.2SG the music
 "Do you like music?"

- (80) Aimes-tu la musique?
 like.PRES.2SG-SCL.2SG the music
 "Do you like music?"

The intent is then to determine if inversion is attested in children's speech, and if inversion is found more or less often in child French compared to adult French. The morphological interpretation of subject clitics claims that inversion is not regularly found in French anymore, and thus would predict that the rates of inversion should be low for both the children and the adult (Legendre et al. 2010; Culbertson 2010). The syntactic interpretation asserts that inversion is still found in French, and would predict those rates to be high (de Cat 2005). The developmental hypothesis predicts that the rate of subject-verb inversion in child French will be low, but the rate for adult French (or in this case for Katerina) will be high, or at least comparatively higher.

6.3.1 Coding

This part of the analysis is two-fold, as inversion with yes/no questions and *wh*-questions will be explored. In order to collect all instances of subject-verb inversion, I hand-coded the files of the Palasis corpus for all of the interrogative expressions that either were inverted or could be inverted. In other words, while (79) was able to be inverted to form (80), not all interrogatives in French allow this; (81) cannot be inverted to form (82).

- (81) Est-ce que tu aimes la musique?
 Q SCL.2SG like.PRES.2SG the music
 "Do you like music?"

- (82) *Est-ce qu'aimes-tu la musique?
 Q like.2SG-SCL.2SG the music
 "Do you like music?"

Therefore, interrogative expressions that do not allow for inversion, specifically those that are formed with *qu'est-ce que* ('what') or *est-ce que* (which is a tag often used to form questions), were discarded.

Additionally, I discarded any questions that met the following criteria in (83-86):

(83) *The question is an "echo" question.*

If the question was a repetition of a previous statement, and not an actual question, then it was not included in the analysis. These are not expected to be inverted, as statements are not inverted in French. Katerina often produced echo questions, as in the exchanges in (83a-b), when talking with the children; in (83a), the second question would have been disregarded, and in (83b), the question in response to RIT would not have been counted.

(83a) KAT: Quel âge il a?
what age SCL.3SG have.PRES.3SG
"How old is he?"

LUS: euh euh trois ans
uh uh three years
"Uh uh three."

KAT: Il a trois ans?
SCL.3SG have.PRES.3SG three years?
"He is three years old?"

(from file 2-5)

(83b) RIT: Il dort.
SCL.3SG sleep.PRES.3SG
"He sleeps."

KAT: Il dort?
SCL.3SG sleep.PRES.3SG
"He sleeps?"

(from file 7-27a)

(84) *The question is a wh-in situ question.*

It should be noted that, in French, there is a distinction between echo questions and *wh*-in situ questions. Unlike echo questions, which are never seeking information, *wh*-in situ questions may serve either as echo questions or "information questions" (Santorini & Kroch 2007). They may, then, serve the same function as *wh*-questions but without the *wh*-movement. Regardless, these

questions are not inverted in French, and are thus excluded from the analysis as well. Examples of *wh*-in situ questions are found in (84a-b).

(84a) Tu fais quoi? (ELE, 2-9d)
 SCL.2SG do.PRES.2SG what
 "You do what?"

(84b) Et toi tu cherche quoi Massimo? (KAT, 3-13e)
 and PRON.2SG 2SG SCL search.PRES.2SG what Massimo
 "And you, you are looking for what, Massimo?"

(85) *The question ended with any of the following tags: 'hein', 'd'accord', 'ok', 'hm', 'c'est ça', 's'il te plait', 'oui'.*

These questions are also not "information questions." The tags are included for conversational reasons, and are not indicating that any actual information is sought after by the speaker.

(85a) Oui, tu joues avec ton frère c'est ça? (KAT, 7-27b)
 yes, SCL.2SG play.PRES.2SG with your brother this-be.PRES.3SG that
 "Yes, you play with your brother, is that it?"

(85b) Toi aussi tu veux raconter une histoire oui? (KAT, 1-2)
 PRON.2SG also SCL.2SG want.PRES.2SG tell.INF a story yes
 "You too, you want to tell a story, yes?"

(86) *The question featured an expletive subject.*

In general, expletive subjects behave differently than non-expletive subjects. The decision was to omit them to avoid potential complications and to maintain consistency with the first analysis.

Any and all other examples of interrogative expressions will be included in this research and subject to analysis. The expressions that had not been discarded are all questions that could be inverted. Through this representative sample, the rates of inversion within this corpus will be determined.

6.3.2 Analysis

Table 24 illustrates the corpus size for this analysis. It lists the total number of yes/no questions and *wh*-questions that were included in this analysis. The adult produced a lot more

interrogative expressions (especially yes/no questions) than the children, but this is not surprising as she was interacting with all of the children and led the conversation most of the time.

Table 24 Corpus for Analysis of Inversion

	Yes/No Questions	Wh-Questions	Total Number of Questions
Children	250	127	377
Katerina	1153	243	1396

In order to find the rates of inversion I calculated the total number of interrogative expressions with and without inversion per individual per file. Then, I found the total number of inverted and non-inverted phrases for each child and for the adult. After this was completed, I determined the total number of inverted and non-inverted utterances produced by all of the children, and the average rate of inverted phrases for the children and for the adult.

Then, the results were subjected to statistical analysis, once again through the application of a one-sample t-test. The children are expected to invert questions as often as the adult if they have an adult-like representation of subject clitics. There is an additional component here, however. The morphological interpretation dictates that the hypothetical value for the adult should be low, if inversion is no longer readily attested in French. The syntactic interpretation dictates that this value should be high. No expected values (or rates) are actually provided by Legendre et al. (2010), Culbertson (2010), or de Cat (2005). However, as previously mentioned, it is also possible that the observed value would not match the hypothetical value (the adult rate) if children and adults have different grammars and different representations of subject clitics. Of course, it is also possible that inversion is no longer attested in French (as the morphological interpretation claims), regardless of whether or not subject doubling is a stage in the acquisition process, but a disparity could potentially be another indication of competing grammars.

6.3.3 Results

The results from this analysis indicate that neither the children nor Katerina produced questions with subject-verb inversion often. In fact, the children hardly produced any tokens of inversion in the entire corpus; they produced one inverted yes/no question, and only five inverted *wh*-questions. Katerina did not invert either yes/no questions or *wh*-questions. These findings are summarized in Tables 25-27. As neither the children nor Katerina provided many examples of inversion, there is not a statistically significant contrast between their rates.

Table 25 Yes/No Questions

	Inversion	No Inversion	Total	% of Inversion
Children	1	250	251	0.4%
KAT	0	1153	1153	0%

Table 26 Wh-Questions

	Inversion	No Inversion	Total	% of Inversion
Children	5	124	129	3.9%
KAT	0	243	243	0%

Table 27 Total- Yes/No Questions and Wh-Questions

	Inversion	No Inversion	Total	% of Inversion
Children	6	374	380	1.6%
KAT	0	1396	1396	0%

6.4 Discussion

The results from the second analysis are mixed; they demonstrate that the children in the Palasis corpus are behaving like the adult in regard to inversion, but unlike her in regard to negation. The children's rate of *ne*-retention is significantly lower than that for the adult, Katerina, whereas they have almost identical rates of inversion. Nevertheless, the results for both negation with *ne*-retention and inversion argue against the syntactic interpretation of subject

clitics; the syntactic approach predicts that rates of both should be high if *ne* and inversion are still regularly attested in French. Therefore, these results weaken the syntactic analysis and provide support for the morphological and developmental hypotheses. De Cat (2005) claims that subject clitics could not be functioning as verbal affixes because material may intercede between the subject clitic and the verb, and because the clitic may move from its pre-verbal position. If *ne* is not found between the subject clitic and the verb when negation is used, and if the verb is not being moved to a higher position than the clitic, then the objections raised by de Cat are refuted.

The results are interesting for another reason. As mentioned, the differing rates of *ne*-retention demonstrate that the children's syntax differs from that of the adult in the same corpus. It is possible that there are two separate stages of acquisition that are overlapping here: one that corresponds to subject doubling, and one that corresponds to the omission of the *ne* marker. This does not seem likely, however, as the adult's rate of *ne*-retention, while significantly greater, is not even at 10%. This means that Katerina does not include the *ne* marker over 90% of the time when producing negated utterances. These numbers reflect a general trend regarding negation in French, in which the post-verbal marker alone signals negation, as Legendre et al. (2010) and Culbertson (2010) have suggested. This trend has in fact been documented by Grieve-Smith (2009), in which Modern French is characterized by a gradual loss of the *ne* marker.

Perhaps it is because rates of *ne*-retention and inversion are so low in French that allows children to analyze subject clitics as verbal affixes. During the acquisition process, children are sensitive to "microcues," or minute details about the grammar (Lightfoot & Westergaard 2007). If children learn from their input that the subject clitic always precedes the verb and that only object clitics are allowed to intercede between the subject clitic and the verb, this could encourage the interpretation of subject clitics as affixes that have a fixed position with respect to

the verb. In other words, if *ne*-retention and inversion would prohibit the interpretation of subject clitics as affixes, and both are generally lacking in Colloquial French, then it is reasonable to conclude that children receive evidence that subject clitics *could* be inflectional affixes.

The results from the second analysis provide support for the morphological analysis and the developmental hypothesis. These results confirm that both the rates of *ne*-retention and inversion are low, even in adult speech. However, this analysis found that contrast between the rates of *ne*-retention for the children and the adult is statistically significant, which may suggest that the syntax of child and adult French is different in regard to negation, and consequently in regard to the representation of subject clitics. Children are not presented with much evidence that *ne* may intervene between the clitic pronoun and the verb, causing them to believe that the subject clitic is in a fixed position in relation to the verb. If they believe that the clitic pronoun has this fixed position, instead of assuming that the *ne* marker is simply optional in conversational speech, this will cause them to omit *ne* more often than the adult; thus, even though the adult may rarely retain it (as part of a general trend), the child may not retain it because he represents subject clitics as affixes. The syntax of child French, then, supports an analysis of subject clitics as inflectional affixes.

CHAPTER 7: CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

This research has been an attempt to answer three related questions, namely, do French-speaking children and adults have the same representation of subject clitics? How are these representations defined from a theoretical perspective? And how are these representations manifested in production, i.e. particularly in what has been referred to as subject doubling? The results of the two corpus-based analyses suggest that the children and the adult in the Palasis corpus represent subject clitics differently, and that this is mainly reflected in increased rates of subject doubling. This finding allows for an evaluation of the three competing hypotheses, which is provided in sections 7.1 and 7.2. Overall, this research supports the developmental hypothesis, and the reasons for this conclusion are summarized in sections 7.2.1 through 7.2.4. Directions for future research are provided in sections 7.3 and 7.4.

7.1 Evaluation of the Syntactic Analysis

The syntactic analysis claims that French subject clitics are syntactic arguments in child and adult French, and that doubled constructions are instances of dislocation. The problem with this analysis is that it neither accounts for the high rate of production of doubled constructions observed in child French, nor why children and adults differ in these rates of production. This analysis also argues that the rates of *ne*-retention and inversion should be high, but the rates of both in child French are actually quite low and, in fact, the difference in the production rates of *ne*-retention in child and adult French is significant. Regardless of how clitic pronouns may be represented in the target grammar, these results suggest that children pass through a stage in development in which they often, but not always, represent subject clitics as affixes.

7.2 Evaluation of the Morphological Analysis and Support for a Stage in Development

The two competing hypotheses that remain, then, are the morphological analysis and the developmental analysis. Both of these hypotheses claim that clitic pronouns in child French are verbal prefixes; the former argues that clitic pronouns are affixes in child and adult French, while the latter claims that only children represent them as affixes, as part of a stage in linguistic development. The latter hypothesis crucially claims that subject clitics are syntactic arguments in adult French. The task, then, is to determine if the children's and adults' production is divergent enough to claim that they represent clitic pronouns differently, and if there is enough evidence that the adult production reflects the traditional, syntactic analysis. While the results of the individual corpus analyses completed here are, at times, "conflicting" (i.e. some substantiate the developmental analysis, while others seem to substantiate the morphological analysis), the overall findings of this study support the developmental analysis. This conclusion stems from several fundamental observations of child and adult French. First, I maintain that adult French is not a null-subject language. Second, there are differences in the rates of production of subject doubling between children and adults that cannot be explained if they both have the same representation of these clitic pronouns. Third, adult French exhibits numerous syntactic contexts where doubling *should* be found, if subject clitics are indeed affixes in adult French, but is not; this provides evidence that, despite affix-like properties that subject clitics exhibit, they are nevertheless functioning as arguments in the adult grammar. Lastly, there is enough quantitative evidence to suggest that the child-directed French in this corpus allows the children to learn that subject clitics are indeed syntactic arguments. These observations will be discussed in detail in the following sections.

7.2.1 French as a Null-Subject Language?

The morphological analysis assumes that French is a null-subject language; this is in fact a necessary assumption if it is to be argued that French subject clitics are affixes despite not always being directly preceded by a strong pronoun or full DP (i.e. a syntactic argument). If French is a null-subject language, then subjects may be omitted, but clitic pronouns would be required to indicate agreement. However, as tempting as it is to explain the data by categorizing adult French as a null-subject language, there is simply not enough conclusive evidence to claim that it should be classified as such.

One criterion that has generally been used to determine if a language permits null subjects is the production of expletives (Hyams 1989). Both null and non-null subject languages allow for overt subjects, however the latter also make use of expletive subjects, as these are required to fill the [spec IP] because *pro* is not licensed.⁹ French-speaking adults, including the adult in this corpus, produce these subjects regularly. Prior research has found that expletive subjects may be dropped in certain contexts (Culbertson & Legendre 2013). For this reason, Legendre et al. (2010) have claimed that null expletives indicate that French is becoming a null-subject language. However, this optionality of including or dropping an expletive subject is not characteristic of null subject languages in general; Italian, for instance, does not make use of expletive subjects at all. Plus if expletive subjects are affixes, it is expected that they would pattern much like the referential subject clitics (qua affixes in this account); specifically, they should surface with all finite verbs that take a non-referential subject. If subject clitics were affixes denoting agreement with the verb, then why would they be able to be omitted? It seems

⁹ However, not all null subject languages lack expletive subjects, cf. De Crousaz & Shlonsky (2003).

that null expletive subjects would actually reinforce the claim that clitic pronouns are syntactic arguments, as affixes should not be able to be dropped.

Additionally, if French-speaking children are learning a null-subject language, their production of RIs is difficult to explain. As previously mentioned, following a variational learning model of language acquisition, the length of the RI stage is dependent on how much consistent evidence children are presented with that indicates that tense needs to be specified. Wexler (1998) found that children learning non-null subject languages, however, tend not to produce any RIs, as they are provided with overwhelming evidence informing them that tense must be specified. This property of RIs, namely that they are regularly attested only in non-null subject languages, has been upheld in the literature, and has indeed received cross-linguistic support.¹⁰ RIs are produced by French-speaking children (Rasetti 2000; Legate & Yang 2007). This implies that either French cannot be classified as a null-subject language, per Wexler (1998), or that Wexler's theory about the connection between null subject languages and RIs needs to be challenged. Legendre et al. (2010) take the latter approach, arguing that French is a null subject language in spite of this RI stage. If this is true, it remains to be explained why children learning other null subject languages, such as Italian, do not also pass through an RI stage, however. In other words, if the generalization offered by Wexler is wrong, what is the appropriate generalization?

Lastly, the low rate of subject doubling in adult French casts doubt on the idea that strong pronouns and full DPs are overt subjects, when included, in the adult grammar. If French is a null-subject language, then it might be expected that French-speaking adults would produce a rate of subject doubling that is on par with the rate produced by adults who are speaking a known

¹⁰ RIs are not totally absent from null subject languages, as children learning these languages may produce a few instances of RIs (Liceras et al. 2006). However, their rate of production of RIs is so low that this generalization is still upheld.

null subject language like Italian. Bates (1976) found Italian adults produce overt subjects 30-40% of the time, but Valian (1991) calculated the rate of overt subjects with the same data and found the rate to be between 46%-56%. Regardless, these numbers are considerably higher than the overall rate of subject doubling for the adult in the Palasis corpus (5.3%). The production rate of subject doubling for adult French, then, does not seem to be consistent with the rates of overt subjects in null subject languages. If non-doubled structures equated to phrases with a null subject, the adult would be including null subjects around 95% of the time, whereas the Italian adults only produce them around 50% of the time. It seems more likely that French-speaking adults are producing dislocated structures, which is again in line with the developmental analysis. Interestingly, Italian-speaking adults produce *more* overt subjects than children (Valian 1991); the French-speaking adult in this study, however, produces fewer doubled constructions than the children in the corpus. Thus, the production of the adult in this corpus is, again, not consistent with what is found in a null subject language. This suggests that the strong pronouns and full DPs in doubled constructions in adult French are not serving as overt subjects in place of the subject clitic. Therefore, based on the criteria discussed here, adult French seems to be a non-null subject language, as it has been traditionally characterized.

But what about child French? There is another possible explanation to the results of this analysis. It could be that the children in this corpus assume that French is a null subject language. If children believe that French is a null subject language, and the subject clitic is an inflectional affix, then they would be producing doubled structures when they would like to include an overt subject. Null subject languages allow overt subjects, but do not require them. This could explain why the children in this corpus do not produce doubling consistently, for all persons, and do not produce rates near ceiling. In either case, the claim is that children are behaving differently than

the adult because they are interpreting the subject clitic as an affix as a result of competing grammars. However, there are different interpretations of *why* children double, based on whether or not child French should be classified as a null subject language (or whether these children are still in a null subject stage) or not. It is difficult to make a definitive claim about how children are conceptualizing the language in this respect; if children interpret the subject clitic as an affix, there are thus two theoretically plausible conclusions as to how they are reconciling the apparent lack of an overt subject. Either they search for an overt subject to satisfy the EPP, but are also influenced by the competing target grammar which tells them the subject clitics are arguments, or they assume that null subjects are licensed in French, giving them the option to include an overt subject, and produce a doubled construction. Both accounts maintain that rates of doubling should not be at ceiling, and that doubling corresponds to a stage in development.

While it is impossible to definitively claim that these children represent French as a non-null subject language, there is some evidence that this may be the case. If child French is a null-subject language, it is unclear as to what would motivate the children to make the transition to the adult grammar, which, again, I am assuming behaves like a non-null subject language. If they assume that strong pronouns and DPs are overt subjects and null subjects are allowed, then the fact that children are exposed to both doubled and non-doubled constructions would not be particularly informative for them. The rates of *ne*-retention and subject-verb inversion are low for the adult, so these rates alone are unlikely to cause them to re-analyze subject clitics as arguments. If children believe that expletive subjects are affixes, then even the presence of expletive subjects will not motivate them. It is thus difficult to explain how children would learn that null subjects are not allowed. Perhaps the strongest piece of evidence, however, comes from comparing the production of doubling in child French to the production of overt subjects in child

Italian. If subject doubling corresponds to the inclusion of an overt subject, then these rates should align. Instead, however, the French children produce more instances of (pre-verbal) overt subjects (26%) than the Italian children (9- 15%)(Valian 1991). It should be noted that the rates given for the Italian children do not include post-verbal subjects; when post-verbal subjects are included the percentage is higher. However, as post-verbal subjects were not coded in this study, I am comparing rates of overt subjects in pre-verbal position alone for consistency. It would be important to eventually find the rate of post-verbal subjects for further analysis of whether or not French-speaking children at this point in development still assume that French is a null subject language. Regardless, at this point it is difficult to explain why French-speaking children are doubling as often as they are based on these rates; if strong pronouns are indeed optional, because *pro* is licensed, then why would children prefer to include a strong pronoun or DP so often (i.e. more often than the Italian children and adults)? This pattern would also contradict research that has been done on children acquiring null and non-null subject languages; children acquiring a null subject language do not go through a stage in which they think their language requires overt subjects and include overt subjects more often. The opposite is found, however; children acquiring a non-null subject language initially pass through a stage in which they omit subjects *more* frequently than adults (Valian 1991). Nevertheless, more research would be useful to confirm that the children in this corpus are not operating within a null subject grammar.

7.2.2 Difference in Rates of Production

The morphological analysis predicts that subject clitics are affixes in both child and adult French. As a result, similar rates in production are expected, especially since Legendre et al. (2010) claim that adults provide evidence that subject doubling is licensed. The results of this corpus analysis, however, have found a distinct difference between the children and the adult in

their rates of production of doubling, most notably with the first and third person masculine subject clitics. The children "doubled" the first person subject clitic almost 38% of the time, compared to less than 10% of the time for the adult. They doubled the third person masculine 15% of the time, compared to the adult's rate of 5%. While the split in the rates of doubling based on the type of clitic pronoun may have been somewhat unexpected, this finding should not be particularly striking; person effects have in fact been observed for the acquisition of clitic pronouns. Kaiser (1994) conducted a study of two bilingual, French-speaking children and found that they displayed a similar pattern in regard to the emergence of French subject clitics in their speech; third person subject clitics appeared first, followed by the first person subject clitic, and then by the second person subject clitic. The differences in the rates of subject doubling per clitic pronoun for the children may be attributed to a developmental pattern in acquisition (perhaps certain subject clitics are identified more readily as affixes), and the differences between these children and the adult may again be explained if children pass through a stage which causes them to deviate from the target grammar of the adult language. The morphological analysis does not account for this divergence.

7.2.3 Non-Obligatory "Doubling" and Consequences of an Affixal Interpretation

There are additional complications with the morphological interpretation that are avoided with a developmental approach. Perhaps the biggest complication is the fact that not all verbs are preceded by a subject clitic, and subject clitics are expected to be required if they are affixes that denote agreement with the verb. For instance, indefinite subjects and quantifiers are never doubled in French. Culbertson (2010) claims that there may be constraints on subject doubling that are sensitive to definiteness or indefiniteness of the subject. However, it is also possible that in adult French, doubling with indefinites is impossible because clitics are arguments, and only

definite subjects may be placed in Topic position. The inability to double indefinite subjects and quantifiers could then provide evidence to children that subject clitics are not affixes in the target grammar. Both explanations are possible, but the claim that subject clitics are arguments in adult French requires no added assumptions about constraints on subject doubling.

7.2.4 Quantitative Support for the Developmental Hypothesis

If children initially represent subject clitics as affixes, the question remains, how do they learn that they are actually syntactic arguments? As previously mentioned, children are forced to re-analyze subject clitics when they are presented with enough evidence for the target grammar. In an attempt to quantify the evidence that children in different non-null subject language are presented with for [\pm Tense], Legate and Yang (2007) found the percentage of tokens from child-directed speech (i.e. the input) in corpora on CHILDES that rewarded [+Tense] and [-Tense] out of all tokens (in this case verbs), and determined the "numerical advantage" that the [+Tense] option has; this was found by subtracting the percentage of tokens rewarding [+Tense] from the percentage rewarding [-Tense]. This same model may be applied here to determine the quantity of evidence that the children in this corpus receive from the input (or, in this case, from Katerina) for the two competing grammars. All non-doubled expressions, negated expressions with *ne*, and questions with subject-verb inversion may be taken as evidence that subject clitics are in fact functioning as clitic pronouns. Conversely, all doubled constructions, negated expressions without *ne*, and questions without subject-verb inversion may be taken to be evidence for an affixal interpretation. By finding the total number of tokens that reward the interpretation of subject clitics as arguments and the total number that reward the interpretation of subject clitics as affixes, out of all tokens collected, the numerical advantage may be determined. As Table 28 illustrates, the children are presented with more evidence that reinforces the interpretation of

subject clitics as syntactic arguments, and thus the target grammar has the numerical advantage. Following the variational model of learning, this advantage indicates that the target grammar, in which clitics are indeed pronouns, should "win out," causing the children to eventually realize from the input that subject clitics are not affixes in French.

Table 28 Quantitative Evidence for Competing Grammars in Child-Directed Speech

	Number of Tokens
Rewards- Pronoun (P)	4196/6471 (64.8%)
Rewards- Affix (A)	2275/6471 (35.2%)
(P - A) %	29.6%

It should be noted that this specific calculation is based on the factors investigated here. There are other aspects of the adult grammar that could reward or punish either interpretation. For example, if subject clitics precede each verb in a conjoined verb phrase, this could be seen as support for the affixal interpretation. Prosodic analysis indicating that strong pronouns are dislocated, on the other hand, would reward the target grammar. Thus, the evidence that children must interpret in deciding whether or not subject clitics are affixes is sure to encompass much more than just rates of subject doubling, *ne*-retention, and subject-verb inversion.

It is also possible that, even with the three cues in this model, some are more influential than others. It may be that *ne*-retention and subject-verb inversion have more weight. The adult does not produce a high rate of subject doubling (5.3%) (see Table 8). This implies that 94.7% of the time, the argument interpretation is rewarded. The target grammar has the numerical advantage in this case (89.4%). However, her rates of *ne*-retention and subject-verb inversion are rather low as well; her rate of *ne*-retention is 7.8%. This means that, in regard to *ne*-retention, the affixal interpretation is actually rewarded 92.2% of the time. In this case, the child grammar has the numerical advantage. The affixal interpretation is also rewarded 100% of the time by the rate

of subject-verb inversion. Thus, while the *overall* rates found in Table 28 indicate that the adult grammar has the numerical advantage, the affixal interpretation is being reinforced by the rates of *ne*-retention and subject-verb inversion, and it is these two rates in particular that are causing the children to consider two competing grammars. It is the low rate of subject doubling that ensures that children eventually assume the adult grammar, as it is this rate that rewards the interpretation of subject clitics as arguments. It is true that the rate of "doubling" (i.e. dislocation) in adult French rewards the affixal interpretation as well, if the subject clitic is initially analyzed as an affix, because doubling is consistent with both interpretations. The other rates are less ambiguous in rewarding an affixal interpretation based on this model, and thus could be more influential in creating competition in child French. For this reason, it might be that these two rates should possibly be given more weight in the calculations.

7.3 Directions for Further Research

While the research presented here has revealed several patterns suggesting that clitic pronouns are represented differently in child French, there are questions that still remain. This research on French subject clitics has been focused on how they behave syntactically, without consideration of acoustic properties that have been appealed to the past. It has been claimed that dislocated pronouns are associated with distinct prosodic features (de Cat 2005). If this is true, then the prosody of strong pronouns and full DPs before subject clitics could provide additional evidence as to how to interpret them. The most important prosodic indicators for dislocation are, according to de Cat (2005), "stress [...] on the last syllable of the dislocated element, and pitch (i.e. melodic) prominence on that syllable." Doetjes et al. (2002) point to a rise in F0 for the target (dislocated) element and a lengthening in the duration of the last syllable of that element. If subject clitics are analyzed as affixes in child French, and strong pronouns and DPs are

analyzed as arguments, then a prosodic analysis should reveal that the latter elements are not characterized by any of the aforementioned features. If subject doubling corresponds to a stage in acquisition, as is claimed, then the same pattern that has been reoccurring throughout this research should again surface here: a distinct difference between child and adult French should be found. While de Cat (2005) and Culbertson (2010) have pointed to different studies with adults to support the interpretation that they adopt, there has not been any research conducted, that I am aware of, that compares the prosody associated with these constructions for children and adults.

Relatedly, this study also focused only on strong pronouns and DPs to the left of the subject clitic, and not on those to the right of the phrase (as in (87)).

- (87) J'aime le livre moi.
 SCL.1SG-like.PRES.1SG the book PRON.1SG
 'I like the book, me.'

It seems as if the only method of determining whether these elements are dislocated elements or arguments is to analyze the prosody associated with them. Legendre et al. (2010) and Kaiser (1994) have referred to right-dislocated elements as post-verbal subjects, in line with their claim that subject clitics are affixes and that French is a null-subject language. The latter claim, Kaiser (1994) argues, is substantiated by what Chomsky (1981) refers to as "Free Inversion" of subjects. However, the problem with this analysis is that Kaiser (1994) states that a phrase with a post-verbal subject "does not *necessarily* involve a pause" (emphasis mine), which means that these phrases could involve a pause signaling dislocation. In this case, then, prosody seems to be integral in deciding whether or not right-dislocated elements are actually affixes. It would also be informative to find out if the rates of production of these constructions are equivalent in child and adult French. In other words, it is necessary, in subsequent research, to further define what constitutes subject doubling.

7.4 The Need for More Data: Evaluating The Possibility of Language Change

Perhaps the central claim of Legendre et al. (2010) and Culbertson (2010) is that French is in the process of changing, so that subject clitics are gradually evolving to become affixes. The idea that clitics may transform into inflectional affixes is not in itself controversial; Givón (1976) has claimed that this is a consequence of the grammaticalization of dislocated pronouns, and this is also what Legendre et al. (2010) and Culbertson (2010) claim. Spencer and Luís (2012) also document that it is common for clitics to evolve into affixes. The possibility that the French language is undergoing a process of diachronic change makes it rather difficult to dismiss the morphological analysis outright; it is certainly reasonable to suggest that French is currently in the midst of change, but determining that that is the case is rather difficult. Longitudinal studies are needed to determine if such a transformations are occurring. The data in this study is recent, from 2010. It would be more informative if subject-doubling data could be obtained that reflects how rates have changed over time. Following the morphological analysis, these rates should have increased over time, and, presumably, this analysis expects that these rates will continue to increase as this process unfolds. In addition, rates of *ne*-retention and inversion should be dropping. However, until more data is analyzed and future data obtained, it is impossible to make any definitive claim about the projection of the French language and any possible change.

The reason for caution when considering the possibility of language change is that all children pass through various stages of linguistic development before they acquire the target grammar. Inconsistencies between child and adult speech typically reflect gaps in knowledge, but as children gain proficiency in language these "errors" are generally corrected. It is true that some of the errors found in child speech are not always remedied; these occasionally persist even as children's language matures, and the adult grammar is transformed as a result (Lightfoot

&Westergaard 2007). Nevertheless, it is of the utmost importance that what is a normal part of linguistic development is not mistaken for an example of diachronic change.

The purpose of this study is not to discredit the possibility of change, but to suggest that an alternative hypothesis, based on the acquisition process, may be a more likely explanation, as there is currently not enough longitudinal evidence to definitely claim that French subject clitics are actually becoming affixes. For this reason, the developmental analysis is favored over the morphological analysis, but the issue of language change must be left as an open question, as longitudinal data will need to be continually collected and analyzed to effectively respond to this debate. Currently, subject doubling appears to correspond to a stage in child French, but this leads to further questions to clearly define this stage: when does this stage begin? At what age do French-speaking children make the transition to the adult language? The answers to these specific questions, and others, will only be found after children's productions are analyzed over time through future research.

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