

# Object Clitics as a Clinical Marker of SLI in French: Evidence from French-English Bilingual Children

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## 1. Introduction

Researchers have found that the use of object clitics is a notable area of difficulty for French-speaking children with SLI (Hamann et al, 2002; Jakubowicz et al, 1998; Paradis & Crago, 2002). Could object clitic use function as a clinical marker of SLI in French, similar to what has been suggested for tense marking in English SLI (Rice & Wexler, 1996)? One step toward addressing this question would be to determine how specific to French difficulties with object pronominals are, and also to tease apart whether it is the anaphoric nature of pronominalization in general, or the morphosyntax of object pronouns in French in particular, that is the root of the problem. The present study compares object pronominalization in the French and English language production of bilingual children with SLI in order to determine whether difficulties in French are more pronounced in this domain than in English. Such a result would point to the morphosyntax of object pronouns in French as being the root of the problem.

## 2. Object pronouns in French and English

According to the typological analysis of Cardinaletti & Starke (1999; 2000), pronouns can be categorized as being weak or strong. Pronouns belonging to the weak category are subject to certain distributional and discourse-pragmatic restrictions, as well as to certain phonological restructuring processes. For example, weak pronouns cannot be coordinated, cannot participate in constituent modification, cannot appear in peripheral positions, cannot typically be used with either ostention or stress in discourse. Pronouns in the strong category show the mirror image of these distributional and discourse-pragmatic properties in that they can occur in coordinated constructions, can be constituent modified and must appear in a peripheral position. In addition, strong pronouns typically stand in for human referents unless they are demonstrative.

French has both weak and strong pronouns. Subject and object clitics (*je, tu, il/elle, on, nous, vous, ils/elles; me, te, le/la, nous, vous, les*) are categorized as weak pronouns and the tonic pronouns (*moi, toi, lui, elle, nous, vous, eux*) and the demonstrative *ça* are strong pronouns. In contrast, with a few marginal cases, English has just strong pronouns, both the nominative and accusative personal pronouns (*I, you, he/she/it, we, they; me, you, him/her/it, them*) and the demonstrative pronouns (*this, that, these, those*). French not only has added

complexity due to the presence of a dual pronominal system, but also because the distribution of lexical objects, clitic objects and strong pronouns is not straightforward. As shown in (1a and b), lexical objects and the demonstrative *ça* appear in the direct object postverbal position. On the other hand, the examples in (1c and d) show that direct object clitics appear preverbally, leaving the canonical object position vacant. Strong personal pronouns cannot appear in the direct object position, but they can appear in a postverbal PP, as illustrated by (1e and f).

- (1) a. Brigitte mange la banane.  
 Brigitte eat.PRES DET:FEM banana  
 ‘Brigitte is eating the banana’
- b. Brigitte mange ça.  
 Brigitte eat.PRES DEM  
 ‘Brigitte is eating that’
- c. Brigitte la mange.  
 Brigitte DO.CLI:FEM eat.PRES  
 ‘Brigitte is eating it’
- d. \*Brigitte mange la.  
 ‘Brigitte is eating it’
- e. \*Brigitte mange elle.  
 Brigitte eat.PRES DO.SPRO:FEM  
 ‘Brigitte is eating it’
- f. Brigitte donne une banane à elle  
 Brigitte give.PRES DET:FEM banana PREP SPRO:FEM  
 ‘Brigitte is giving a banana to her’

### 3. Acquisition of object clitics in French

The use of object clitics is relatively late in the language production of normally-developing children acquiring French (Chillier et al, 2001; Clark, 1985; Hamann et al, 1996; Jakubowicz & Rigaut, 2000). Object clitics emerge later than subject clitics, between the ages of 2;6 to 3;0. Object clitics are an even more problematic area in French SLI (Chillier et al, 2001; Hamann et al, 2001; Jakubowicz et al, 1998; Paradis & Crago, 2002a). French-speaking children with SLI produce object clitics intermittently even past the age of school entry, and frequently produce sentences with object omissions as a result. Because difficulties with object clitics are a hallmark characteristic of SLI in French, it may be the case that omission of object clitics is a potential clinical

marker of SLI in French the way that omission of tense/agreement morphology has been considered a clinical marker of SLI in English (Jakubowicz, 2002; Rice & Wexler, 1996). A clinical marker is an aspect of language that is stable in use in the normal population but variable in the same-aged impaired population, thus examining the use of this aspect of language could circumscribe the clinical population.

There are several possible reasons why object clitics are so difficult to acquire in French, with and without SLI: (1) the complexity of the pronominal system – French has both weak and strong pronouns; (2) clitics are a deficient type of pronoun, so acquiring them involves having to learn the restrictions on their placement; (3) object clitics appear in a non-salient, non-canonical preverbal position; (4) object clitics are anaphors, and so their use requires coordination of morphosyntax with discourse-pragmatics, which could be more challenging than the use of aspects of morphosyntax that are structurally determined, like person agreement, and (5) all of these reasons combined.

Examining the use of object pronominalization in French-English bilingual children with SLI could shed light on what aspect of object clitics poses difficulties for children acquiring French with SLI. If anaphoric reference in general is the problem, then bilingual children with SLI should have difficulties with object pronouns in both French and English. On the other hand, if they have difficulties only in French, this would support the argument that it is the morphosyntactic structure of object clitics in French that poses the difficulty. More broadly, examining French-English bilingual children will tell us just how specific to French problems with object pronoun acquisition is, and this would also be important for determining whether object clitic omission is a viable clinical marker of SLI in French.

#### **4. Method**

##### **4.1 Participants**

This study includes two groups of children: 7 French-English simultaneous bilingual seven-year-olds with SLI (BILSLI) and 9 French-English simultaneous bilingual normally-developing three-year-olds who are matched by MLUw to the children with SLI in both languages (BILND). We included the ND group to find out if difficulties with object clitics in SLI represented an extension of an earlier stage in normal development, like tense marking difficulties in English. Table 1 shows the mean ages and MLUws in both languages for the two groups of children. Mann Whiney U comparisons between the two groups' MLUw for English ( $z = -1.323, p > .05$ ) and French ( $z = -0.37, p > .05$ ) were not significant. Wilcoxon Signed Rank tests between the MLUws in French and English for the BILND group ( $z = -0.652, p > .05$ ) and the BILSLI group ( $z = -1.183, p > .05$ ) were also non-significant. Thus, these ND and SLI groups are matched with respect to this measure of language development.

Both groups of children had acquired French and English simultaneously from birth, and resided in either the greater Montreal or the Ottawa/Hull region of central Canada. The following criteria were used to determine inclusion in

the SLI sample: (1) nonverbal IQ within the normal limits; (2) no frank neurological damage; (3) no significant hearing loss; (4) no severe social-emotional difficulties; (5) no moderate or severe articulation difficulties; (6) below age-expectations for expressive language abilities in both French and English as measured by standardized tests.

**Table 1. Ages and MLUws in French and English**

GROUP	AGE	FRENCH MLU <sub>w</sub>	ENGLISH MLU <sub>w</sub>
BILND	3;3	3.706	3.493
BILSLI	7;3	3.557	3.856

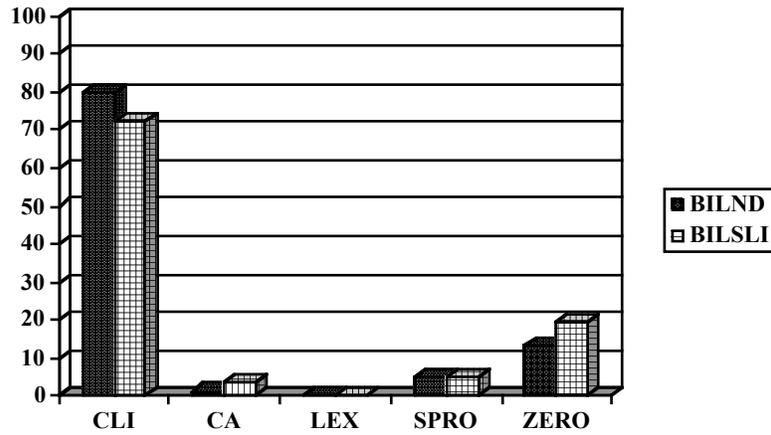
#### 4.2 Procedure

Spontaneous language samples were videotaped in both French and English, on separate occasions, for all the children. In the case of the BILSLI group, children interacted either with one of the research assistants or with a parent, both of whom spoke the language of the testing session natively. Videotapes were transcribed and coded following the conventions of the CHAT system and analyzed using CLAN (MacWhinney, 2000). The language samples were coded for contexts where direct object pronominalization was permissible (referent previously mentioned in near discourse), and for what the child supplied in those contexts along a continuum of argument realization possibilities (French: zero object, clitic, *ça*, strong personal pronoun, lexical object; English: zero object, personal pronoun, demonstrative, lexical object). The data were also coded for whether the correct form of the pronoun was used in terms of person, number, and for French, gender.

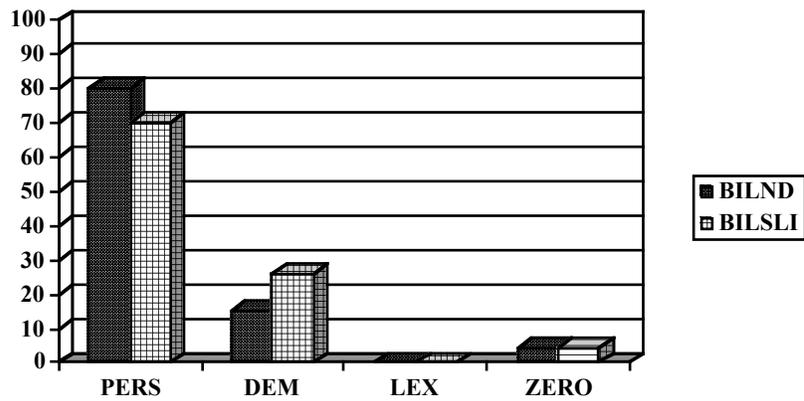
## 5. Results

### 5.1 French-English comparisons

The first analysis we performed was to examine the distributions of the different object types in object pronominalization contexts in French and English. Thus, we calculated the percentage of each object type out of the total number of object pronominalization contexts and the results of this calculation are presented in Figure 1 for French and Figure 2 for English. In French, both the BILND and the BILSLI children supplied clitics in object permissible context more than any other type. The next most frequent type was a zero object (object omission). In English, the most frequent object type given was a personal pronoun, followed by a demonstrative pronoun. Importantly, these two grammatical options in English comprise virtually all the object types used by the children in English. In other words, zero objects hardly appeared in English at all.

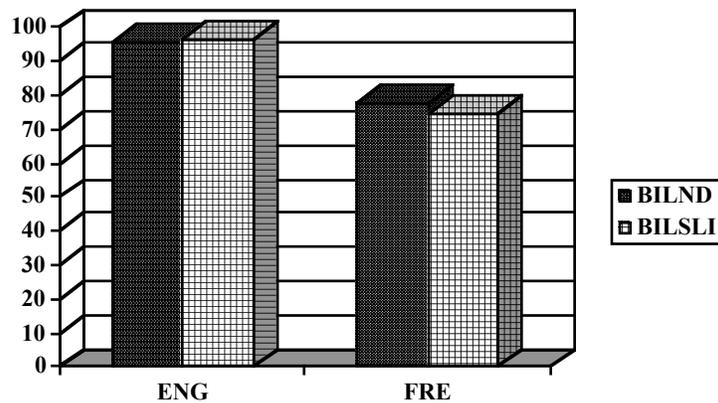


**Figure 1. Distribution of object types in object pronominalization contexts for BILND and BILSLI groups in French**



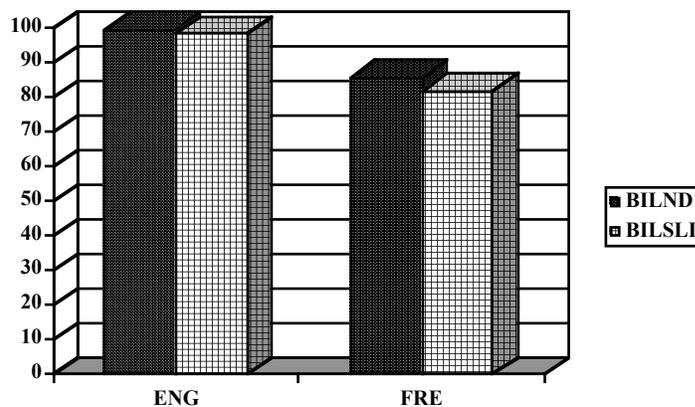
**Figure 2. Distribution of object types in object pronominalization contexts for BILND and BILSLI groups in English**

Next, we compared French and English between the two groups of children with respect to grammatical versus ungrammatical object types. For French, grammatical types included clitics and the demonstrative *ça*. For English, grammatical types included personal and demonstrative pronouns. We calculated the percent of grammatical object types out the total number of object types used in pronominalization contexts. The results of this analysis, given in Figure 3, show that the children in both the BILND and BILSLI groups supplied object pronouns more often in English than in French. In other words, ungrammatical object types, such as zero objects, occurred more often in French. Wilcoxon Signed Rank comparisons between the two languages of both the BILND and the BILSLI children indicated that this French-English difference was significant (BILND: FRE 78% vs. ENG 96%,  $z = -1.960^*$ ,  $p < .05$ ; BILSLI: FRE 74% vs. ENG 97%,  $z = -2.366^*$ ,  $p < .05$ ). Mann Whiney U comparisons between the French and English scores of both groups revealed that the children were supplying grammatical object types to the same extent in French and in English (FRE: BILND 78% vs. BILSLI 74%,  $z = -0.347$ ,  $p > .05$ ; ENG: BILND 96% vs. BILSLI 97%,  $z = -0.423$ ,  $p > .05$ ). In other words, the seven-year-old children with SLI were performing at the level of three-year-olds in French.



**Figure 3. Comparison between languages of the use of pronouns by the BILND and BILSLI groups**

Our third analysis consisted of comparing the children's accuracy with the form of the pronoun between the two languages when they did supply one. We calculated the percent of correct forms used out of the total number of pronouns used. Incorrect forms had errors in person, number or gender (French only). The results of this analysis are presented in Figure 4. Overall, the children in both groups were more accurate in their form choice for pronouns than they were at supplying them in French. Using Mann Whitney U comparisons, we found no difference in the level of accuracy in French or English between the BILND and BILSLI groups (FRE: BILND 86% vs. BILSLI 82%,  $z = -0.637$ ,  $p > .05$ ; ENG: BILND 100% vs. BILSLI 98%,  $z = 0.524$ ,  $p > .05$ ). However, there was a difference between the ND and SLI groups with respect to their accuracy in French versus English. According to Wilcoxon Signed Rank tests, the BILND groups' score in French was significantly lower than in English, but the BILSLI groups' comparisons fell just short of reaching significance (BILND: FRE 86% vs. ENG 100%,  $z = -2.023^*$ ,  $p = .043$ ; BILSLI: FRE 82% vs. ENG 98%,  $z = -1.859$ ,  $p = .063$ ).



**Figure 4. Comparison between languages of correct pronoun form used by the BILND and BILSLI groups**

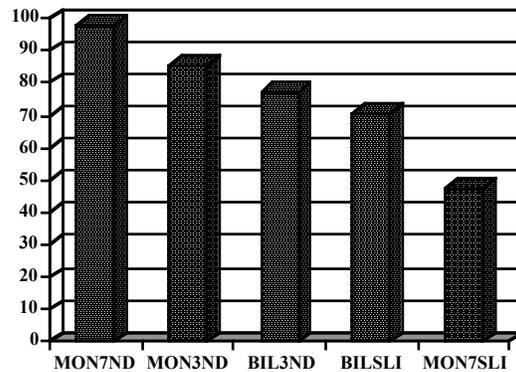
## 5.2 Focus on French: bilingual and monolingual comparisons

In this section we compare the French data from the bilingual children with data from a previous study on monolingual French children (Paradis & Crago, 2002b). In Table 2, the ages and French MLUw are presented from both the bilingual children, as well as three groups of monolingual children: normally developing three-year-olds and seven-year-olds, and seven-year-old children with SLI. All these monolingual children spoke the same dialect of French as the bilingual children and resided in the same area of Canada. Data collection procedures for all the children and inclusion criteria for the SLI group were the same as in the present study. For more details, see Paradis & Crago (2000; 2001). The bilingual and monolingual three year olds are matched exactly on mean age and closely on mean MLUw. The ND seven-year-olds are exactly matched in age to the bilingual seven-year-olds with SLI, and closely matched with the monolingual seven-year-olds with SLI. Finally, the bilingual and monolingual children with SLI are closely matched on mean MLUw.

**Table 2. Sample size, age and French MLUw of bilingual and monolingual groups**

GROUPS	N	AGE	FRENCH-MLUw
BILND	9	3;3	3.71
BILSLI	7	7;3	3.56
MON3ND	10	3;3	3.67
MON7ND	10	7;3	5.70
MONSLI	10	7;6	3.98

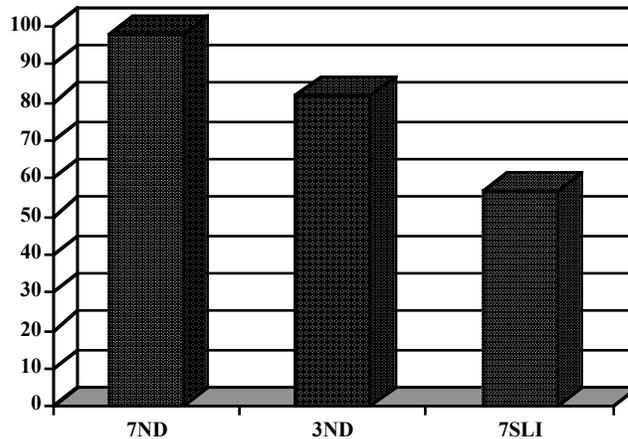
The purpose of including the monolingual children was to see if the bilingual children use object clitics to a similar extent as their monolingual counterparts, and whether the relationship between the language-level matched, younger ND children and the children with SLI is the same for the monolingual and bilingual populations. The percent use of object clitics in object pronominalization contexts is given in Figure 5 for all the French-speaking children. As expected, the MON7ND are at ceiling and are using object clitics in virtually every permissible context. The MON3ND and the BIL3ND fall in the middle with mean accuracy rates over 75%. The BILSLI and MON7SLI have the lowest accuracy rates at 70% and 47% respectively. This distribution indicates that the bilingual children fit into the range defined by the monolinguals; however, the BIL3ND and BILSLI groups are closer to each other in performance than the MONSLI and MON3ND. If acquiring French along with English were causing children, with and without SLI, to slow down their rate of morphosyntactic development, the scores for these children might have fallen outside the monolingual range.



**Figure 5. Comparison between monolinguals and bilinguals for the percent use of object clitics in object pronominalization contexts in French**

Rice & Wexler (1996) found that for tense marking in English, the patterns displayed by the children with SLI could be characterized as an extension of an earlier stage in development, the optional infinitive stage, and hence, they describe this aspect of SLI in English as an extended optional infinitive stage. However, even though difficulties in tense marking were common to both the children with SLI and the younger, language-matched ND children, Rice & Wexler (1996) found that the children with SLI had more severe difficulties than the younger ND children. This distinct profile shown by the children with SLI from *both* age-matched and language-matched ND children is one reason why these researchers suggested that tense marking difficulties could be a useful clinical marker. In order to see whether this difference in profile holds for object clitic use in French, we combined the scores from the bilingual and monolingual children to make three groups for Figure 6: ND seven year olds, ND three-year-olds and seven-year-olds with SLI. We believe pooling the bilingual and monolingual data is justified given how they pattern in Figure 5. In addition, pooling creates a large base from which the mean is calculated. The pattern illustrated by Figure 6 is analogous to the one Rice & Wexler (1996) found for tense marking in English, with a stepwise decrease in suppliance rate from the ND age peers to the ND language peers to the children with SLI. Most

important, the children with SLI show a distinct level of suppliance from *both* ND groups.



**Figure 6. Object clitics in object pronominalization contexts across monolinguals and bilinguals**

## 6. Summary and Conclusions

We found that the bilingual children, both with and without SLI, used pronouns significantly more often in English than in French in contexts where object pronominalization was possible. Further, both the ND children and the children with SLI were more accurate in their form choice for pronouns in English than in French, but only the ND children showed a statistically significant difference for this measure. The crosslinguistic difference between French and English in the use of object pronouns suggests that the difficulties with object clitics that have been observed in French monolingual acquisition are indeed specific to French. In addition, because the bilingual children were virtually at ceiling with respect to their accuracy in suppliance and form with English object pronouns, it is not likely that difficulties with anaphoric reference is at the root of the problem in French. On the contrary, these data from bilingual children argue in favour of the morphosyntactic complexity of clitics being the source of the problem for children acquiring French.

In comparing these findings for bilingual French with our prior findings on monolingual French, we found that the bilingual children were similar to the monolinguals in that their rates of object clitic use fit into the range defined by ND and SLI monolinguals. Contrary to what might be expected if bilingualism caused a deceleration in development, the bilingual children with SLI were more accurate than the monolingual children with SLI we have studied. When the data from both the monolinguals and bilinguals were pooled, the results revealed a similar pattern to what has been found for tense marking in English where the children with SLI display a unique profile from both of their ND comparison groups. In conclusion, our data suggest that object clitic omissions in expressive language may be a useful clinical marker in French for both monolingual and simultaneous bilingual populations. It is important to qualify the term 'bilingual' with 'simultaneous' because ND sequential bilingual or second language children also have problems with object clitics in French (Paradis & Crago, 2002a). Future research may show object clitic omissions to be a useful clinical marker in other Romance languages as well.

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