

The Acquisition of Partitive Clitics in Romance Five-year-olds

1. Introduction: The acquisition of clitics

Many studies have shown that the acquisition of direct object clitics is characterized by an initial period of optional omission (around age three), a gradual improvement and the attainment of an adult like performance at the age of five years (see the results of Jakubowicz et al. 1996 for French, Schaeffer 2000 for Italian, Wexler, Gavarró and Torrens 2004 for Catalan, and, for a general review, Varlokosa et al, in preparation). Although some studies have also pointed out that not all clitics are acquired at the same pace, very little is known about the acquisition of partitive clitics. According to Bottari et al. (2004) these are among the last clitics to emerge, although the reason why that should be remains unclear. Here we report the first experimental results on the production of the partitive pronoun *ne/en* (1) in early L1 acquisition of three Romance languages, Catalan, French and Italian.

- (1) Gianni ha comprato molte mele ma *ne* ha vendute poche/tre. (Italian)
Gianni has bought many apples but CL has sold few/three
'Gianni has bought many apples but has sold few/three of them'
- (2) *En* té dos/ molts (de llibres de lingüística). (Catalan)
CL has two/many of books of linguistics
'He has two/many.'
- (3) Il *en* a deux/beaucoup (de livres de linguistique). (French)
he CL has two many of books of linguistics
'He has two/many.'

This construction, which has not been previously tested in L1 acquisition, consists of a transitive verb with a partitive pronoun (as in (1) to (3)). In the Romance languages, the partitive pronoun is a clitic and is found in Catalan, French, Italian (all tested in this paper), and other languages, such as Occitan. The partitive may be followed by a quantifier or a numeral, as in (1), (2), and (3) or not, as in (4a), but in either case it is obligatory, as shown in (4b-c):

- (4) a. En té (de llibres de lingüística). (Catalan)
CL has of books of linguistics
b. *Té tres / molt.
has three/many

- c. *Té.
has

The partitive clitic may also be found with unaccusative verbs, cliticising the only argument of the verb, as in (5). However, the acquisition of this construction will not be examined in this paper.

- (5) a. Arriben dos trens. N' arriben dos. (Catalan)
arrive-3pl two trains CL arrive-3pl two
'Two trains arrive. Two arrive.'
b. Il est tombé beaucoup de neige. Il en est tombé beaucoup. (French)
it is fallen much of snow it CL is fallen much
'A lot of snow fell. A lot fell.'

In order to investigate partitive clitic production, two tasks were developed, an elicited production task and a repetition task.

2. Background: Spontaneous production studies

Although there are no experimental studies of partitive clitic production in child Romance, there are a few studies looking at spontaneous production. Hamann, Rizzi & Frauenfelder (1994) analyzed the corpus of a French-speaking child, A., for the period 2;0,2 to 2;9,3. According to them, Augustin produced the first partitive clitic *en* in the file recorded at age 2;9,2; in the next file, at age 2;9,30, he produced 4. This is to be compared with the first production of a direct object clitic *le*, which was reported at age 2;2,13, although no other direct object clitic was recorded until the age of 2;6. For Italian, Bottari and collaborators studied the emergence of direct object (Bottari et al. 1998, Bottari et al. 2001) and partitive clitics (Bottari et al. 2004), but this last work remains unpublished.

For Catalan, Gavarró, Mata & Ribera (2006) analyzed spontaneous production of three children in the CHILDES database, both for direct object and partitive clitics. The children and periods considered were: Gisela (20 files, age 1;10,7–4;2,3, MLU: 1.18–3.53), Guillem (33 files, age 1;1,29–4;0, MLU: 1.07–2.5) and Pep (31 files, age 1;1,28–4;0, MLU: 1.46–4.1). The first occurrence of *en* was at 1;8,3 for Gisela, 2;6,10 for Guillem, and 1;10,6 for Pep (later than the direct object clitic for Guillem only). The graphs showing the development of the partitive clitic are as follows (the numbers indicate the files):

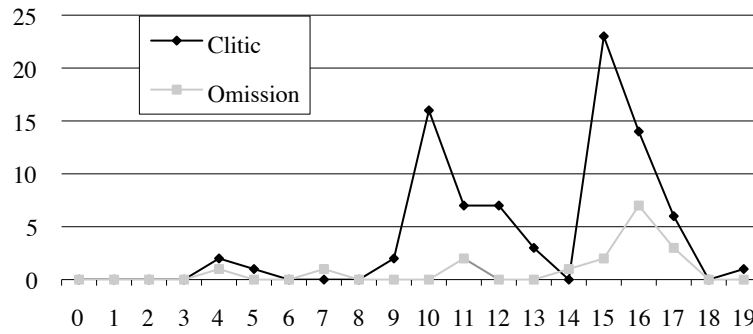


Figure 1: Production and omission of *en*, Gisela

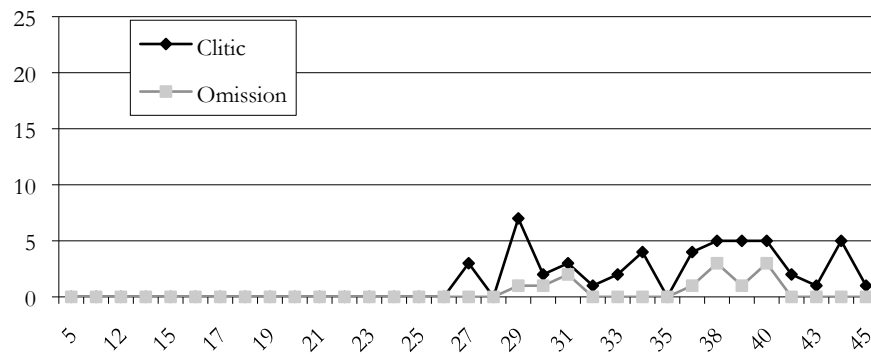


Figure 2: Production and omission of *en*, Guillem

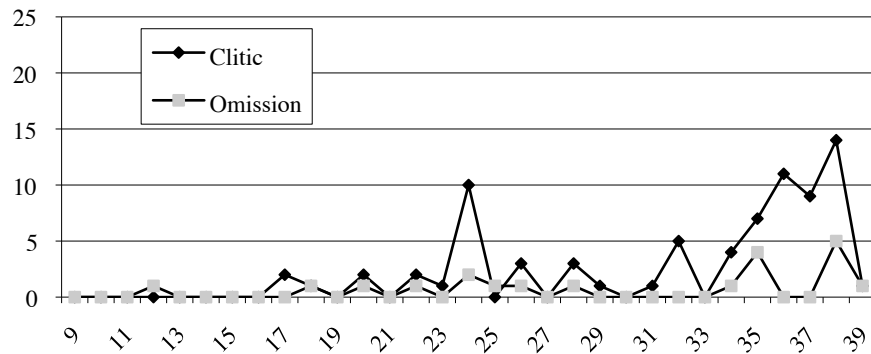


Figure 3: Production and omission of *en*, Pep

Gavarró et al. (2006) concluded that *en* production was subject to optional omission, and that omission appeared to last slightly longer than direct object clitic omission.

All of these studies bear on the early development of the partitive clitic; here, we examine the development of the partitive clitic at age five, an age critical for

the assessment of linguistic development in children.¹ Indeed, direct object clitic production has been claimed to be a clinical marker for Specific Language Impairment (SLI) in some of the languages under investigation here (and specifically at age five, in Bortolini et al. 2006).

3. An elicitation and a repetition task

3.1 Experimental design

3.1.1 Elicitation

Our experiment was construed as a guessing game in which the child had to answer questions asked by the experimenter, which in some cases required some corrections forcing the use of a partitive clitic. The materials consisted of pictures printed for the children to hold, of which the experimenter could only see a partial version. In order to guess what was depicted in the picture, visible only to the child, the experimenter asked yes/no questions. All questions included a transitive verb and a quantified object. Test questions corresponded to incorrect guesses, which were meant to trigger a correction on the part of the child. The expected verbal correction would involve again a transitive verb and a quantified object, plus the partitive clitic required in these transitive sentences given that the NP was known information appearing in the immediately preceding linguistic context. The method is illustrated in (6)–(7). Filler questions were also included, which corresponded to correct guesses.

- (6) Una mare amb gallines. Que cuida tres gallines?
'A mother with hens. Does she take care of three hens?'



- (7) EXPECTED ANSWER: No, en cuida una.
'No, she takes care of one.'



The total number of experimental items was 12, plus 10 distractors. The verbs used for the experimental items were the equivalents of 'have' (3), 'take' (3), 'walk' (3), and 'take care of' (3), as shown in (8). A list of all experimental items appears in the appendix.

- (8) Experimental items: verbs
- a. Catalan: *tenir, portar, passejar, cuidar*
 - b. French: *avoir, prendre, promener, garder*
 - c. Italian: *avere, portare, tirare, curare*

Because, as we shall see in detail below, eliciting partitive pronouns is quite difficult, a repetition task was also designed.

3.1.2 Repetition

The method involved reading a short story to the child, which crucially involved a partitive clitic in the last sentence in all experimental items. The experimenter asked the child to repeat the last sentence, so that the experimenter could be sure (s)he had been paying attention. We exemplify the stories with Catalan in (9):

- (9) Aquesta és la història d'un ós que troba una pomera. L'ós agafa unes quantes pomes de l'arbre i les posa al cistell. Després arriba un mico i agafa dues pomes i les carrega al seu cistell. I després l'ós diu: –Quin mal d'esquena! Saps perquè té mal d'esquena, l'ós? Perquè carrega moltes pomes. El mico no té mal d'esquena *perquè no en porta gaires*.

'This is the story of a bear who finds an apple tree. The bear takes several apples from the tree and puts them in his basket. Then a monkey arrives and picks two apples and puts them in his basket. Later on the bear says: What a back ache I have! Do you know why the bear has a back ache? Because he's carrying lots of apples. And the monkey has no back ache because he's not carrying very many.'

The number of experimental items was 13, and there were 5 distractors with direct object clitics instead of partitive clitics. The verbs used were the equivalents of 'carry', 'eat', 'steal', 'buy', 'hide', 'drink', 'take', 'find', 'wash', 'have', 'sell' and 'see'.

3.2 Subjects

We tested a total of 60 five-year-old children, native speakers of Central Catalan, Italian, and French, as well as adult controls. The Catalan-speaking children were recruited in the CEIP Pompeu Fabra in Manlleu, Osona; the French-speaking children in a public school in the city of Blois (*Région Centre*); the Italian-speaking children in the Scuola dell'Infanzia Santo Stefano di Lecco in Northern Italy (see Table 1). An ANOVA on the age of the three groups of children revealed a significant effect of age, with Italian children being younger than French children, as established by Post Hoc Scheffé test ($p < .05$). As we will see, however, this difference in age did not affect the overall performance.

Language	<i>N</i>	Mean age
Catalan	20	5;4
French	20	5;7
Italian	20	5;4

Table 1: Child participants

The Catalan adults ($n=23$) were students at the Universitat Autònoma de Barcelona, the French-speaking adults were students at the Université François-Rabelais, Tours ($n=12$) and the Italian-speaking adults were students at the Università di Milano-Bicocca ($n=20$).²

3.3 Procedure

The children were tested individually in a quiet room in their schools, in sessions that lasted around 20 minutes. First, a short training session for the elicitation task took place, then the elicitation task was administered, and, finally, the repetition task was run. Children were allowed to ask for items to be repeated

in both tasks. French and Italian adults were tested in the same fashion; Catalan adults were tested all together in a classroom and were asked to write down the answers on an answer sheet.

4. Results

4.1 Elicited production

In the elicited production task, children did not produce high numbers of partitive clitics, as can be seen in Figure 4, which shows the mean number of responses containing a partitive clitic (/12) that were produced by children in each of the three languages. Examples of such responses are given in (10).

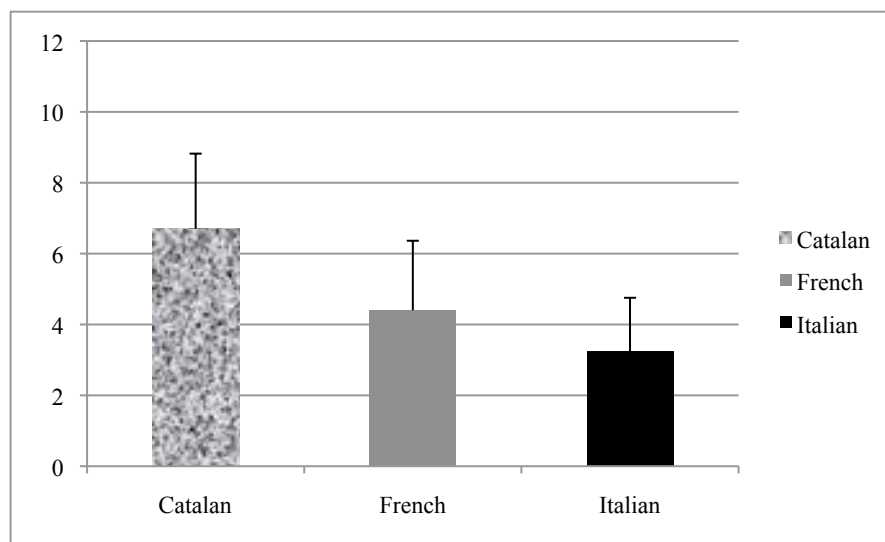


Figure 4. Mean Number of Responses (/12) with a Partitive Clitic: 5-year-olds

- (10) a. Ne sta tirando due. (Italian)
 CL is pulling two
 'She's walking two (of them).'
- b. En porta dos. (Catalan)
 CL carries two
 'She's carrying two (of them).'
- c. Elle en garde deux. (French)
 she CL takes-care-of two
 'She's taking care of two (of them).'

An ANOVA with language as independent variable and percentages of clitics

as dependent variable revealed a significant effect of language ($F(2,57) = 4.3605$). A post-hoc Scheffé test revealed that Catalan-speaking children used significantly more partitive clitics than Italian-speaking children ($p < 0.05$).

Despite the low numbers for partitive clitic production, and the crosslinguistic variability (to which we return below), a major result emerged from this experiment: No statistically significant difference was found across the languages tested for partitive clitic omission ($F(2,52) = 22.519$, $p = .237$), and, moreover, as can be seen in Figure 5 below, such omission was quite generally very low in each of the three languages (2.5% for Catalan, 4.2% for French, and 2.9% for Italian). Catalan children did not produce any omission at all. Five Italian children and seven French children omitted partitive clitics, though usually only once each (and never more than three times). Examples of these rare omissions appear in (11).

- | | | | |
|------|----|------------------|-----------|
| (11) | a. | Sta tirando due. | (Italian) |
| | | is pulling two | |
| | b. | No té cap. | (Catalan) |
| | | no has none | |
| | c. | Il promène pas. | (French) |
| | | he walks not | |

Figure 5 also shows that children gave many non-omission answers which nevertheless did not include a partitive clitic. They produced elliptical answers (with a numeral or a quantifier), in which no verb was produced and, therefore, no pronominal clitic, as in (12), and they also gave answers which, while containing a verb, also had a full DP complement, as in (13). A statistical analysis indicates that there is a significant effect of language in the production of DPs ($F(2,52) = 22.519$, with post hoc Scheffé test revealing that French-speaking children produced more DP answers than the other children ($p < 0.05$).

correct false statements, repetition of the DP may have resulted from the intention to provide a sentence as similar as possible to the lead-in, or may indicate emphasis on the DP. Finally, we note the relatively high number of ‘no responses’ in Italian for which we have no particular analysis. It could be the case that the experimenter did not manage to force the children to come up with an answer, in contrast to what happened in the two other languages (for which answers were almost always provided by the children).

We now turn to the presentation of results based solely on answers containing a verb. While these represent the contexts where a partitive clitic could potentially occur, and thus, at first blush, would appear to be the only relevant answers, it is important to remember that verbal answers containing a full object DP were not pragmatically inadequate, as explained above. Likewise, answers not containing a verb (elliptical responses) were also pragmatically acceptable. Putting together Figures 4 and 5, we see, in Figure 6, that French children produced more responses containing a verb. This difference owes to the way the experiment was run. For French, the experimenter insisted on ‘long answers’, while in Catalan and Italian the experimenters did not, and therefore children produced many more ‘short answers’, i.e. elliptical answers without a verb (also, in the case of Italian, there were many more cases of non-responses).

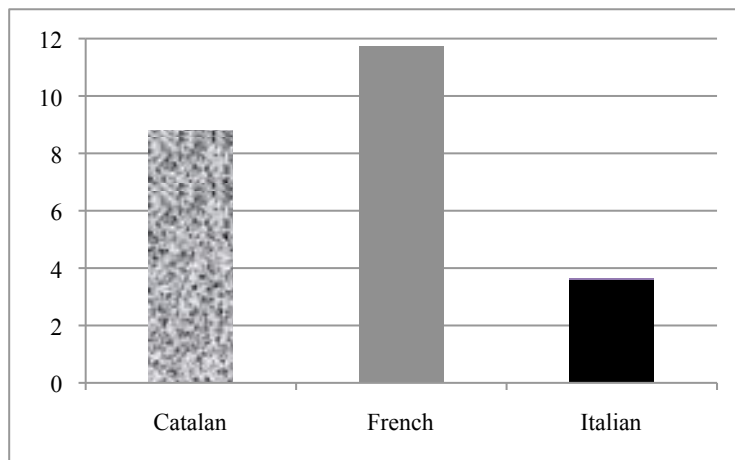


Figure 6. Responses Containing a Verb (Mean N / 12): Five-year-olds

This difference between the languages is also related to the type of DP responses children made, as reported in Figure 5: In French these were responses in which the DP occurs as the object of a verb, in Italian they were isolated DPs (as well as cases of No Response), and in Catalan both of these occurred.

When partitive clitic production was calculated over total verbal utterances, i.e., over those sentences in which clitic production was possible, as in Figure 7, it was found that Catalan- and Italian-speaking children used more clitics than their French peers. Once again, a significant effect of language was found ($F(2,52) = 13.003$; $p < 0.005$). A post-hoc Scheffé test reveals that Catalan and Italian are different from French. Thus, in spite of the fact that Catalan and Italian children were younger they used more clitics in answers containing a verb. Note however, that this difference was largely due to the fact that fewer verbal answers were provided in Italian and Catalan than in French, which increases the ratio of clitics over verbal utterances in the first two languages.

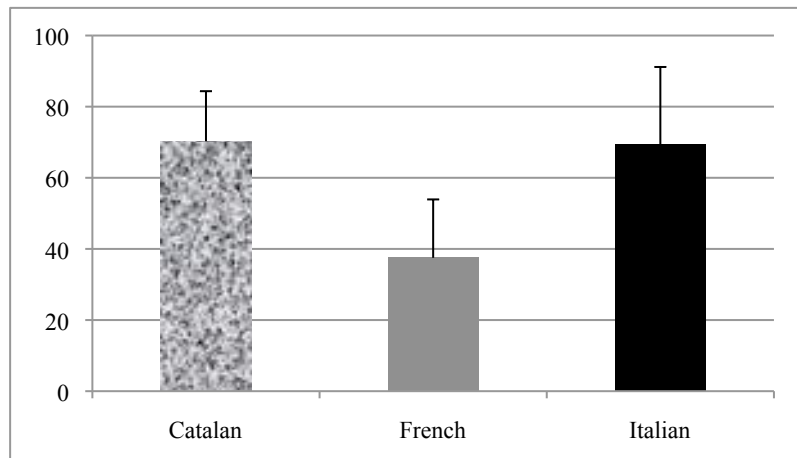


Figure 7. Percentage of Partitive Clitics / Responses with a Verb: Five-year-olds

Turning now to the adult results, Figure 8 shows that adults generally produced many more partitive clitics than children did, in each of the languages tested.

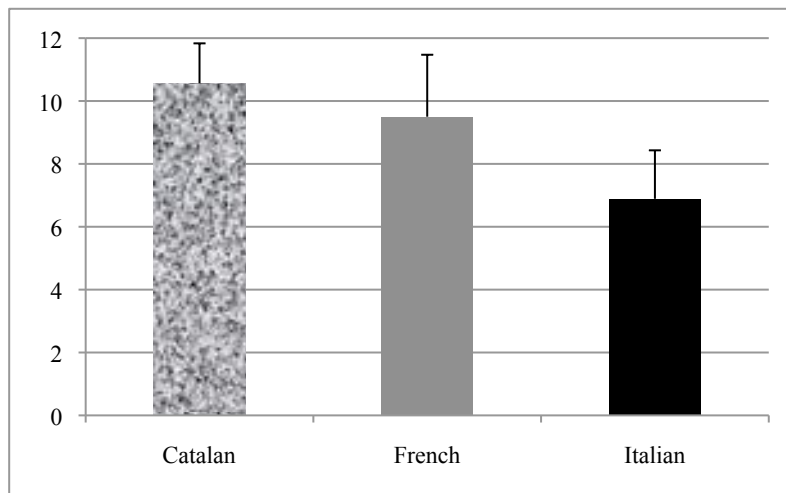


Figure 8. Responses with a Partitive Clitic (Mean $N/12$): Adults

The adults also produced responses in which no partitive clitic was produced, including options found in the children's responses (full DPs, for example), as can be seen in Figure 9 for Catalan and French.

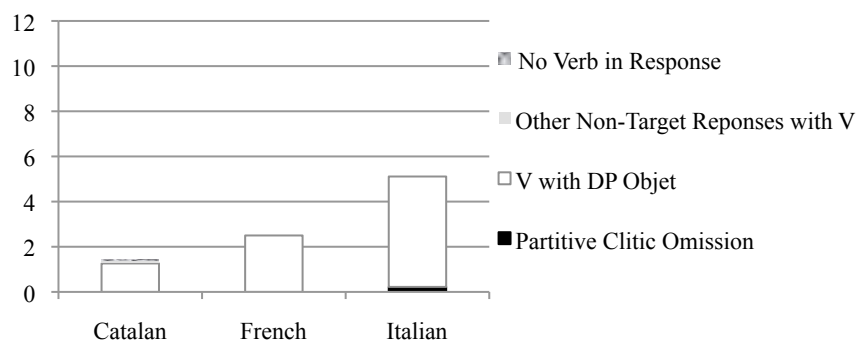


Figure 9. Responses Not Containing a Partitive Clitic (Mean $N/12$): Adults

As in the child production, no significant partitive clitic omission was found in the adult participants, in any of the three languages.

Summarizing, children in all three languages were similar in their very low rates of partitive clitic omission. The crosslinguistic differences observed with respect to the use of full DPs and answers with a quantifier only, as has been hinted at, may emerge from the way in which the test was run – i.e. a methodological difference – rather than a difference in the child grammars. In particular, children in all three of the languages very frequently answered by giving a full DP, either with a verb or in isolation. The answers provided by the children fell within grammatical well-formedness and were pragmatically acceptable (indeed adults sometimes gave answers of this type); variation ensued only from additional constraints such as the mentioned request for ‘long answers’. This methodological bias also affected adult production, albeit to a lesser degree, as adults spontaneously produced many more partitive clitic responses.

4.2 Repetition task

In the repetition task, very few omissions and DPs were produced, and the task proved to be more effective. Children were correct between 92 and 98% of the time and there were no statistically significant differences between languages. This task was only run with children. We can conclude that repetition is an efficient task for the elicitation of partitive clitics.

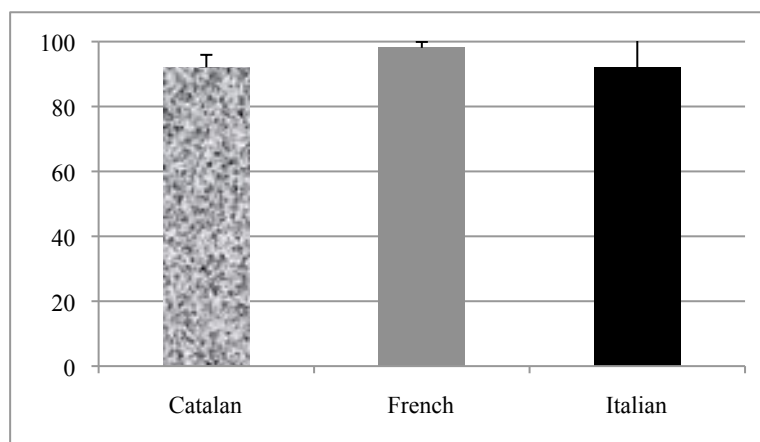


Figure 10. Partitive Clitic Repetition: Five-year-olds

5. Conclusions and topics for future research

We can conclude from our study that at five years of age children exposed to a language with partitive clitics both produce such clitics, and, more importantly, do not omit them. Partitive clitic omission was rare in Catalan, French and Italian,

both in the elicitation task and in the repetition task we conducted.

There is also a methodological conclusion of our study: of the two tasks run, repetition fared better than elicitation in terms of the number of target and useful answers, because elicitation gives room for various grammatical and pragmatically felicitous answers without a clitic, in children as well as adults. Indeed, verbal answers should not be considered to constitute a strategy for avoiding the partitive clitic, in contrast to what has been proposed in the literature for the use of object DPs instead of accusative clitics (see, among others, Jakubowicz et al. 1998). If DP production were a way for children to avoid producing partitive clitics, we would need to explain why this strategy seemed to be the only avoidance strategy deployed in this experiment. In experiments eliciting accusative clitics reported in the literature (see Varlokosta et al., in preparation, for review), it has been found that children resorted to both ungrammatical omission (14c) and infelicitous DP repetition (14d) (never found in adults) instead of producing an accusative clitic. Use of a DP object was never pragmatically felicitous in these experiments, as the context was not one of correcting the experimenter's statement, but, rather, response to a question, as in (14a):

- (14) a. Experimenter: Que fait Kiki à Nounours ? (French)
 'What does Kiki to Teddy?'
- b. Target response: Il le lave.
 he CL washes
 'He's washing him.'
- c. Ungrammatical child response: Il lave.
 he washes
 'He's washing him.'
- d. Infelicitous child response: Il lave Nounours.
 he washes Teddy
 'He's washing Teddy.'

However, as we have seen for the experiment reported in this paper, partitive clitics were rarely omitted by the children tested: in other words, children do not seem to have avoided partitive clitic production. If children are not avoiding partitive clitics (since they are not omitting them), it follows that use of object DPs is not evidence for avoidance, but rather simply a legitimate way of correcting the lead-in sentence.

To the extent that partitive clitics are not omitted at age five, children's performance with this clitic is in fact essentially the same as that with third person object clitics in Catalan, French and Italian, which has ceased to be omitted at five (see Schaeffer 2000 for Italian, Gavarró, Torrens & Wexler 2010 for Catalan, Varlokosta et al. in prep. for a large number of languages in which third person clitics were elicited). One possibility that emerges is that partitive clitics are

omitted at an earlier age, just like the third person object clitics of Catalan, French and Italian (see references above). The results available for spontaneous production suggest that there is indeed early omission, but experimental results remain for future research.

Children with Specific Language Impairment have not been tested so far either. Again under the assumption that partitive clitics with transitive verbs are similar to accusative clitics in Catalan, French, and Italian, we would expect higher omission of partitive clitics at age five for children with SLI – parallel to higher omission of accusative clitics found with this population (see the work of Jakubowicz and Nash to appear, Tuller et. al in press for French, Bortolini et al. 2006 for Italian).

Finally, we have only investigated partitives in transitive contexts. As pointed out, they also occur, in Romance, in sentences with unaccusative verbs; if derived subjects are problematic for children (see Babyonyshev et al. 2001) we would predict differences in the production of partitives with unaccusative verbs. This also remains for future research.

References

- Babyonyshev, Maria, Jennifer Ganger, David Pesetsky & Kenneth Wexler (2001) 'The maturation of grammatical principles: evidence from Russian unaccusatives'. *Linguistic Inquiry* 32, 1–44.
- Bortolini, Umberta, Barbara Arfè, M. Cristina Caselli, Luisa Degasper, Patricia Deevy & Laurence B. Leonard (2006) 'Clinical markers for specific language impairment in Italian: the contribution of clitics and non-word repetition'. *International Journal of Language and Communication Disorders* 41: 695–712.
- Bottari, Piero, Paola Cipriani, Lucia Pfanner & Anna Maria Chilosi (2004) 'The acquisition of clitic pronouns and determiners by Italian normal and SLI children: a maturational account'. Workshop 'Generative Approaches to the Acquisition of Morphology, 11th International Morphology Meeting, Vienna.
- Bottari, Piero, Anna Maria Chilosi, Lucia Pfanner (1998) 'The determiner system in a group of Italian children with SLI'. *Language Acquisition* 7: 285–315.
- Bottari, Piero, Paola Cipriani, Anna Maria Chilosi & Lucia Pfanner (2001) 'The Italian determiner system in normal acquisition, Specific Language Impairment, and childhood aphasia'. *Brain and Language* 77: 283–293.
- Gavarró, Anna, Meritxell Mata & Eulàlia Ribera (2006) 'L'omissió dels clítics d'objecte i partitius en el català infantil: dades espontànies'.
- Gavarró, Anna, Vicenç Torrens & Ken Wexler (2010) 'Object clitic omission: two language types'. *Language Acquisition* 17: 192–219.

- Hamann, Cornelia, Luigi Rizzi & Ulrich Frauenfelder (1994) 'On the Acquisition of the pronominal system in French'. *Geneva Generative Papers* 91–103.
- Jakubowicz, Celia, Natascha Müller, Ok-Kyung Kang, Beate Biemer, Catherine Rigaut (1996) 'On the acquisition of the pronominal system in French and German'. *Boston University Child Language Development Proceedings* 20, 374–385.
- Jakubowicz, Celia, Nash, Lea, Rigaut, Catherine, and Gérard, Christophe-Loïc. (1998) 'Determiners and clitic pronouns in French-speaking children with SLI'. *Language Acquisition* 7: 113-160.
- Jakubowicz, Celia & Lea Nash (to appear) 'Why accusative clitics are avoided in normal and impaired language development'. In Celia Jakubowicz, Lea Nash & Kenneth Wexler (eds.) *Essays in Syntax, Morphology and Phonology of SLI*, Cambridge, Mass.: MIT Press
- Schaeffer, Jeannette (2000) *The Acquisition of Direct Object Scrambling and Clitic Placement*. Philadelphia: John Benjamins.
- Tuller, Laurice, Hélène Delage, Cécile Monjauze, Anne-Gaëlle Piller, & Marie-Anne Barthez (in press) "Clitic Pronoun Production as a Measure of Typical Language Development in French: A Comparative Study of SLI, Mild-to-Moderate Deafness and Benign Epilepsy of Childhood with Centrotemporal Spikes" *Lingua*.
- Varlokosta, Spyridoula et al. (in prep.) 'A cross-linguistic study of the acquisition of clitic and pronoun production'.
- Wexler, Ken, Anna Gavarró, Vicenç Torrens (2004) 'Feature checking and object clitic omission in child Catalan and Spanish'. *Romance Language and Linguistic Theory*. Philadelphia: John Benjamins.

Appendix: Experimental items (in Catalan)

1. Un nen indi que porta cavalls. Que porta tres cavalls?
An Indian walking horses. Is he walking three horses?
2. Hi ha una família. Que tenen un gos? filler
There is a family. Do they have a dog?
3. El nen a casa seva, a la seva habitació. El nen té dos ossets?
A boy at home, in his room. Does he have two teddy-bears?
4. same picture Que té una pilota?
Does he have a football?
5. Una àvia que va de viatge. Que porta tres maletes?
A grandmother taking a trip. Is she taking three suitcases?
6. La família amb un arbre de Nadal. Que hi ha posat decoracions? filler
A family with a Christmas tree. Are there decorations on it?
7. Un bomber amb gossos. El bomber, que passeja tres gossos?
A fireman with dogs. Is he walking three dogs?
8. L'àvia amb el cotxet. Que porta un nen a passejar? filler
A grandmother with a pram. Is she taking a child for a walk?
9. same picture Que porta una maleta?
Is she taking a suitcase?
10. La mare a casa. Que té un ram de flors? filler
A mother at home. Does she have a bunch of flowers
11. L'àvia i el nen. L'àvia, que empeny el cotxet? filler
A grandmother and a child. Does she push the pram?
12. El pare indi. Que porta dos cavalls?
The Indian father. Is he walking two horses?
13. same picture: i que passeja dos búfals?
Is he walking two buffalos?
14. El pare que fa el sopar. Que aguanta una cassola? filler
A father making dinner. Is he holding a saucepan?
15. La família índia. Que viuen en una tenda? filler
The Indian family. Do they live in a tent?
16. La mare índia. Que cuida dues gallines?
The Indian mother. Is she taking care of two hens?
17. same picture Que porta dos conills?
And is she taking care of two rabbits?
18. L'ós marró. Que té un osset? filler
The brown bear. Does she have a baby bear?
19. El nen que va a dormir i l'àvia. Que tenen un conte? filler
The boy who goes to bed and the grandmother. Will they read a story?
20. La mare índia amb els nens. Que té tres nens?
The Indian mother with some children. Is she taking care of three children?

21. El nen i la mare indis amb llenya. Que fan un foc? filler
An Indian boy and his mother with some wood. Have they made a fire?
22. El pare indi que va a pescar. Que porta tres peixos a casa?
The Indian father in his canoe. Is he taking three fish home?
-

Endnotes

¹ The research reported here was conducted within the context of COST (European Cooperation in Science and Technology) Action A33, ‘Crosslinguistically Robust Stages of Children’s Linguistic Performance’ (2006-2010).

² Thanks are due to the children who took part in the experiment in Manlleu, Milan, and Blois, and to the students of the Universitat Autònoma de Barcelona, Université François Rabelais, Tours, and Milano-Bicocca for acting as adult controls.