THE ACQUISITION OF VARIABLE PHENOMENA:
THE CASE OF PAST PARTICIPLE AGREEMENT IN QUÉBEC FRENCH

Mihaela Pîrvulescu

Abstract: This paper investigates the use of past participle agreement by young preschool children and adults speaking Québec French. The results show that this type of optional agreement in the target grammar is a late acquisition, starting probably in school-aged children. The main features of the use of past participle agreement seem to be lexical and individual variation, overgeneralisation of the non-agreeing form, and use of agreement in incorrect constructions. Following a distinction between inconsistent and variable input, it is proposed that past participle agreement in Québec French is a type of inconsistent input and as such it is regularized by children as non-agreement. It is proposed that the underlying syntactic mechanism is inert, while the optionality comes from variation over the choice of different lexical forms as a function of their frequency in the input.

Keywords: object agreement, variation, object clitics

1. Introduction

Research on the past participle agreement in French has given mixed information about the robustness of this type of agreement in daily speech. On the one hand, authors such as Audibert-Gibier (1992) states that this agreement is still “alive” in daily speech; on the other hand, authors such as Smith (1996) state that past participle agreement has or will disappear from the productive use of the language. Restricted to a small number of very frequent verbs, past participle agreement is still under-investigated in adult usage and even less in child usage. The aim of this study is to investigate the use of past participle agreement in Québec French, by children and adults, in an experimental setting.

The study of this type of agreement in child speech is interesting for (at least) two reasons. First, recent research focuses on the acquisition of two types of agreement: one that is variable in the input and one that is not. Previous research established that different types of robust or obligatory agreement in the adult grammar are acquired early by children: this is the case of subject-verb agreement (Guasti 1993/1994, Torrens 1995, Grinstead 2000, Félix-Brasdefer 2006, for Romance languages; Brown 1973 for English) or obligatory object agreement (see Ud Deen 2006, for Swahili). What happens if agreement is optional or variable in the adult grammar and therefore less robust in the child input? A distinction is proposed between inconsistent input and variable input (Miller and Schmitt 2009). Inconsistent input is neither linguistically nor extra-linguistically predictable; for example, invented languages or non-native grammars. Variable input (the result of sociolinguistic variation) has at least one type of predictability (linguistic or extra-linguistic). Studies have shown that children learners tend to regularize inconsistent input (Hudson Kam and Newport 2005) while with variable input they tend to show patterns of variability in their own speech (Roberts 1994, Smith 2006, Miller and Schmitt 2009). Second, past participle agreement has been considered as defining two language groups, associated with different behaviour with respect to the realisation vs. omission of direct object clitics (Wexler et al. 1994/1995, Tsakali and Wexler 2004). These authors propose that in a language group where past participle agreement is active, such as French and Italian, there are consequences about object clitic realization/omission: higher rates of omission are to be expected in child language in these
languages. On the contrary, in a language group without past participle agreement, such as Spanish and Romanian, no object clitic omission is to be expected. The correlation that has been proposed is based mainly on a theoretical model of past participle agreement; it was assumed that this agreement is productive in child language. No studies about the actual use of this agreement have been conducted.

Our goal is to look at evidence that past participle agreement exists and it is used productively by young children. To this aim, in section 2 we will review past studies, experimental or based on oral corpora. In section 3 we will present the results of our new elicited production study with three groups of francophone children from the Montréal area. Section 4 will present the discussion of our findings and the conclusion.

2. Previous studies on past participle agreement in French

2.1 Descriptive studies

Agreement (in declarative contexts) between the direct object and the past participle is obtained in French under direct object movement (relativized object and cliticization) as in the examples below:

(1) a. La porte que Jean a peinte.
   ‘The door that John painted.’

   b. Jean l’a peinte.
   ‘John painted it.’

According to Kayne (1989), there are many French speakers who have past participle agreement (PPA) neither with object clitics nor with object wh-phrases. In both cases past participle agreement is optional, at least in informal speech as well as in certain dialects (see Sportiche 1998, Belletti 2006). The agreeing features are number and gender. Only gender on the past participle is audible in spoken French. Gender agreement is inaudible on the object clitic itself because of elision of the vowel:

(2) Tu l’as mangée.
   ‘You have eaten it.’

One of the most important features of past participle agreement in French is the difference between written and spoken language: written past participle agreement is realized by adding an -(e) to the verbal form: caché ‘hidden’, fini ‘done’; this is not audible in speech. Audible past participle agreement only exists with certain verbs (such as mettre ‘put’, construire ‘build’, ouvrir ‘open’, couvrir ‘cover’, etc.) and it is absent from the most productive ones, classes I and II (verbs ending in -er and -ir). In addition, there are several subtle rules governing the agreeing past participle and those are generally taught in school. For example, when the clitic is neutral in meaning, agreement does not take place (see Audibert-Gibier 1992 for a full list of such rules).

2.2 Corpus data

Most of the studies concentrate on the written aspects of past participle agreement (Brissaud 1999, Chiss and David 1992, among others) or on descriptive or theoretical aspects
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Audibert-Gibier (1992) is the only study – to the best of our knowledge – who investigates past participle agreement in European French on an oral spontaneous corpus, including adults and some school age children. Her study reveals that past participle agreement in oral speech depends on linguistic and extra-linguistic factors and that, contrary to what is assumed, francophone speakers seem to obey not the rules that are commonly described and taught in schools, but a mixture of these and some former, very ancient rules (some dating back to the 17th century). We will describe here only the factors relevant for our study (i.e. agreement with a pre-verbal pronominal object). The main linguistic factors are the following:

(i) PPA depends on whether the post-verbal position is realized or not:

(3) a. Vous l’avez écrite. (agreement)
   ‘You wrote it.’
   b. La pile que tu as fait là. (non agreement)
   ‘The pile you made there.’

(ii) PPA is more easily realized with 3rd person pronouns than with 1st and 2nd person pronouns

(4) a. Ça l’a surprise. (agreement)
   ‘This surprised her.’
   b. Ça m’a surpris. (non agreement)
   ‘This surprised me.’ (-fem).

(iii) The presence of an indirect object pronoun prevents PPA:

(5) Il la lui a appris. (non agreement)
   ‘He taught it to him.’

(iv) agreement is more easily realized with certain verbs; for example, with faire ‘make’, it is very frequent while with dire ‘say’ is very infrequent.

The main extra-linguistic factor relevant for the type of past participle agreement we are studying seems to be the age of the speaker: past participle agreement is more frequent in adult speech; with respect to children (two participants), it is weak for a 7 year-old and stronger for a 10 year-old. The study concludes that past participle agreement is still alive in daily speech, generally depending on the register and on the instruction level of the participants.

2.3 Experimental data

Pîrvulescu and Belzil (2008) reports the results of a sentence preference task on agreeing vs. non-agreeing past participle forms. The verbs chosen were those where PPA is audible: mettre, ‘put’, ouvrir ‘open’, construire ‘build’, prendre ‘take’, faire ‘make’, couvrir ‘cover’ and the syntactic context was past participle agreement with a preverbal pronominal object. The participants were preschool children speakers of Québec French from the Montréal suburbs, divided into three age groups: 3-year olds (mean = 3.7), 4-year olds (mean
5-year olds (mean = 5.3) and 30 adults from the same geographical and social environment. The sentences were presented in pairs - an agreeing sentence and a non-agreeing sentence, and the participants were asked to select the one they judged as correct. A very short story preceded the prompt, in order to introduce the lexical object. An example of a sentence pair in the prompt is given below:

(6) Comment est-ce que tu dirais?
   ‘How would you say?’
   Le père l’a ouvert. (without past participle agreement)
   ou / or
   Le père l’a ouverte. (with past participle agreement)
   ‘The Father opened it.’

The experiment consisted of three conditions: a) past participle agreement pairs; b) adjective agreement sentence pairs; c) subject-verb agreement sentence pairs.

<table>
<thead>
<tr>
<th>Participants</th>
<th>PP Agreement</th>
<th>ADJ Agreement</th>
<th>Subject-Verb Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-year-olds; n = 13</td>
<td>29.48%</td>
<td>95.00%</td>
<td>95.00%</td>
</tr>
<tr>
<td>4-year-olds; n = 10</td>
<td>27.77%</td>
<td>90.00%</td>
<td>95.00%</td>
</tr>
<tr>
<td>5-year-olds; n = 10</td>
<td>43.33%</td>
<td>90.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Adults; n = 30</td>
<td>60.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

While adjective agreement and subject-verb agreement were correctly selected by children and adults, agreeing past participles were much more rarely selected. The difference between groups were highly significant and lexical effects were found for past participle agreement but not for subject-verb or adjectival agreement. For the youngest group, this effect was likely due to the verbs ouvrir ‘open’ and especially faire ‘make’. For adults, the effect was likely due to the verbs mettre ‘put’, faire ‘make’, and couvrir ‘cover’. From this experiment, we can conclude that PPA seems to be a late acquisition phenomenon, compared to other types of agreement; it is also an optional phenomenon, from the early stages of acquisition, again in contrast to the other types of agreement and it seems to be tied to certain verbs from the very early stages of its acquisition, as well as in adult grammar.

There was, therefore, a significant difference between obligatory agreement and optional agreement in acquisition. Moreover, in a follow-up experiment, the authors found that children select PPA almost equally in the correct construction (sentence with object clitic) as in the incorrect construction (sentence with DP in postverbal position). An example of incorrect past participle agreement is provided in (7):

(7) a. Tu as construit la tour. (with incorrect past participle agreement)
    b. Tu as construit la tour. (without past participle agreement)
    ‘You built the tower.’

The results are presented in Table 2.
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Table 2. Rate of selection of correct and incorrect agreement (Pîrvulescu and Belzil 2008)

<table>
<thead>
<tr>
<th>Participants</th>
<th>PPA agreement with object clitic</th>
<th>PPA agreement with post-verbal DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 year-olds; n=14</td>
<td>42.85%</td>
<td>52.38%</td>
</tr>
<tr>
<td>Adults</td>
<td>41.66%</td>
<td>13.88%</td>
</tr>
</tbody>
</table>

These results show that past participle agreement is randomly selected, and that even adults sometimes select the agreeing form with post-verbal DP. While these two previous studies give us an idea about young children’s and adult’s reaction to past participle agreement, we still do not know whether and how young preschool children actually use past participle agreement. The next section presents a new experiment aimed at eliciting this type of agreement.

3. New study: elicited production of PPA

In this experiment, 29 children and 11 adults from the greater Montréal area were tested on an elicited production task. The children were identified as French monolingual by their parents. They were distributed in three age groups: 3 year-olds (mean age 3;4), 4 year-olds (mean age 4;4) and 5 year-olds (mean age 5;3). The same verbs were used as in the Sentence Preference Task by Pîrvulescu and Belzil (2008): mettre ‘put’, ouvrir ‘open’, construire ‘build’, prendre ‘take’, faire ‘make’, and couvrir ‘cover’. In addition, we used as fillers 4 verbs whose past participle is not audible: cacher ‘hide’, dessiner ‘draw’, manger ‘eat’, and couper ‘cut’. Children were shown an activity performed by the experimenter (for example, building a tower with building blocks) and told, at the beginning of the session, that they should pay attention to what the experimenter is doing because they would be asked about the activity at the end. The experimenter stressed that we wanted to know whether the child paid attention to the activity. When the activity was completed the child was asked with the following prompt:

(8) Experimenter : Qu’est-ce que j’ai fait avec la tour?
‘What did I do with the tower?’

Expected answer: Tu l’as construite.
‘You built it.’

We used only the 3rd person object clitic, shown by Audiber-Gibier (1992) to appear more frequently with past participle agreement. The children had no difficulties understanding and answering the questions. The results are presented in Table 3.

Table 3. Rate of production of past participles agreement with direct object clitic

<table>
<thead>
<tr>
<th>Participants</th>
<th>Total tokens past participle forms</th>
<th>Past participle agreement</th>
<th>Correct form of agreeing/non-agreeing past participle</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 year-olds; n = 12</td>
<td>33</td>
<td>1 (3.03%)</td>
<td>21 (63.64%)</td>
</tr>
<tr>
<td>4 year-olds; n = 11</td>
<td>50</td>
<td>0</td>
<td>41 (83.00%)</td>
</tr>
<tr>
<td>5 year-olds; n = 10</td>
<td>25</td>
<td>0</td>
<td>20 (80.00%)</td>
</tr>
<tr>
<td>Adults; n = 11</td>
<td>50</td>
<td>19 (38.00%)</td>
<td>50 (100.00%)</td>
</tr>
</tbody>
</table>
The data in Table 3 show that children (almost) never produce past participle agreement. In addition, the form of the participle verb *ouvrir* ‘to open’ seems difficult for young children; this verb accounts for the lower percentages of correct forms in the last column. The children use incorrect forms as in the example below:

(9) a. Tu l’as ouvry/ouvrj.
    instead of:
b. Tu l’a ouvert(e).
    ‘You opened it.’

Older children use the correct form of the verb *ouvrir* more often. The adults seem to produce a low rate of PPA, even lower than in the preference task. Moreover, when used, the PPA is tied to specific verbs: the verbs *détruire* ‘destroy’, *construire* ‘build’ and *ouvrir* ‘open’ almost always with PPA, the verbs *prendre* ‘take’ and *mettre* ‘put’ never with PPA.

It might be the case that past participle agreement is not used because of the high rate of omission of object clitics. Some previous studies report approximately 30% clitic omission in 3 year old children (Jakubowicz et al. 1997, Schmitz et al. 2004, Pîrvulescu 2006, Pérez-Leroux et al. 2008). One interesting finding of this experiment is the high rate of clitic realisation. The results are presented in Table 4.

**Table 4. Object clitic realisation and omission**

<table>
<thead>
<tr>
<th>Participants</th>
<th>Object clitic realisation</th>
<th>Object clitic omission</th>
<th>Use of lexical nouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 year-olds; n = 12</td>
<td>83.49%</td>
<td>5.50%</td>
<td>6.42%</td>
</tr>
<tr>
<td>4 year-olds; n = 11</td>
<td>81.44%</td>
<td>2.06%</td>
<td>14.43%</td>
</tr>
<tr>
<td>5 year-olds; n = 10</td>
<td>86.57%</td>
<td>4.48%</td>
<td>4.48%</td>
</tr>
<tr>
<td>Adults; n = 11</td>
<td>100.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Children show a low rate of clitic omission and use of lexical nouns; together, they cannot account for the absence of past participle agreement from children’s production. Therefore, while the right construction for past participle agreement seems to have been acquired (i.e. the use of preverbal pronominal object), the past participle agreement is not present.

4. Discussion

The findings in both the sentence preference task and the elicitation task point to the following characteristics of the acquisition of past participle agreement:

(i) it seems to be a late acquisition phenomenon; in fact, based on the findings reported by Audibert-Gibier (1992), it might be as late as the beginning of schooling;
(ii) it is not present in production although children are sensitive to it, to some extent, in the sentence preference task, and a development of this sensitivity is observed;
(iii) it is optional when used or preferred (the same person sometimes uses it and sometimes does not);
(iv) it is variable (some people tend to use/prefer it more often, some very rarely);
(v) it is tied to specific verbs.
If we compare the two tasks, the preference task and the elicitation task, we see a sharp difference with respect to the child population: while weak, past participle agreement is present in the preference task but absent in the production task. Why are children not producing past participle agreement? We will discuss two major recent accounts of past participle agreement and investigate how they could account for the current data.

Following work by Kayne (1989), Sportiche (1998) and others, Wexler et al. (2003/2004) and Tsakali and Wexler (2004) propose that the configuration in which past participle agreement is obtained is a Spec-Head relation, as in other cases of agreement. The relevant Spec-Head relation is established within an AgrOP projection as in (10) below, which captures past participle agreement in a clitic construction (based on Sportiche 1998):

\[(10) \ [TP[CIP\text{Spec}_{CL}...[AgrOP\text{pro}...[AgrOV_{\text{past participle}}][VP\text{Spec}_{vt}][DP[tpro]]]])] \]

In (10), the past participle raises to AgrO, while pro raises to SpecAgrO (an intermediate step toward the CIP projection). Past participle agreement takes place in this Spec-Head configuration. Following this, Tsakali and Wexler (2004) propose that past participle agreement is the result of overt checking of an uninterpretable D-feature in a Spec-Head configuration with the verb. French belongs to a family of languages where this feature needs to be checked, while languages that do not manifest past participle agreement are defined as languages where the D-feature is [+interpretable] and as such does not need to be checked overtly. In this analysis, the past participle verb always moves to the appropriate checking head. How then can we explain, within this approach, the case where there is no overt morphological agreement? Wexler et al. (2003, 2004) and Tsakali and Wexler (2004) propose a correlation between object clitic omission in child language and the availability of past participle agreement. If pro moves directly to CIP (or if it obtains default case), there is no checking of the AgrO feature and this projection will be eliminated; the clitic will surface but not the PPA. Case errors on clitics are expected. Thus, following this approach, our data could be explained by proposing that, in child language, the verification mechanism for pro is different from the one in adult grammar: children consistently use the option of eliminating a functional projection (AgrO) while using an anomalous long movement. Data from adult language seem to contradict this analysis: in our elicited production, more than half of the adults behave like the children, in not using past participle agreement; it would be hard to argue that these adults use anomalous long movement. Sportiche (1998) proposes that when the DP pro moves covertly, past participle agreement is not morphologically expressed. In this case, the use of non-agreeing forms would have different sources in child and adult grammar.

Another view if offered by Guasti and Rizzi (2002) and Beletti (2006), where the optional nature of PPA plays a central role. According to this approach, the overt manifestation of agreement in general should be correlated with syntactic checking (i.e. overt checking) and, for verbal agreement in particular, with syntactic verb movement. Applying it to past participle agreement, Beletti (2006) explains its optionality in terms of language-specific optional verb movement. For example, in French it would be similar to optional movement in non-finite verbs. Based on Guasti and Rizzi (2002), this account proposes that only when past participle agreement is morphologically manifested it is the result of syntactic feature-checking; lack of morphological manifestation of agreement is taken to involve no checking of a functional feature, because the verb has not moved to the appropriate head. Below we present the syntactic structure for a direct object clitic construction (from Belletti 1999):

\[(11) \ [TP[AgrOP[Aux][AgrPSpPrtCL][AgrPSpPrtV][VP][vt][DP[tlc]]]]] \]
In (11), the past participle raises optionally to AgrPstPrt (the functional projection responsible for past participle agreement). Agreement with the clitic is obtained through the Spec-Head configuration, with the clitic in the specifier of the participial agreement projection. When there is no overt participial agreement, the verb is taken to remain in situ. Therefore, in order to account for our data, we have to assume that in child language the past participle verb always remains in situ. It is not clear how the instances of past participle agreement with post-verbal lexical DP would be accounted for, in child as well as in adult grammar.

The acquisition data we presented seems to challenge both analyses in that, in the child population we investigated, we observe the following: lexical effects when the past participle is used or preferred, high rate of acceptance of ungrammatical agreement with post-verbal DPs, complete absence of PPA in production, even for older children, and weak use of past participle agreement by adults. These characteristics are not expected under the assumption that past participle agreement is the result of a syntactic mechanism, even an optional one. We would like to propose that past participle agreement in child grammar is a matter of mere lexical selection of a morphological form on an otherwise inert syntactic mechanism. Adger and Smith (2005) propose that the choice between two alternating lexical forms that have the same semantic interpretation “[...] is influenced by a range of use-related factors, such as processing, frequency of individual lexical items in the register of community discourse, and broader sociolinguistic and communicative factors” (Adger and Smith 2005: 173). In other words, we propose that at least by 5 years of age there is no rule of past participle agreement in the child grammar. The forms seem to be selected on the basis of their use in the input as adjectival forms: forms such as fait/faite ‘done’ and ouvert/ouverte ‘open’ are often used as adjectives (cf. Une porte ouverte ‘An open door’ or Une chose bien faite ‘A thing well done’). This would explain why the verbs faire ‘make’ and ouvrir ‘open’ are the most frequently used in their agreeing form.

If our hypothesis is correct, it follows that past participle agreement is learned late, as a written rule similar to, for example, orthographic rules. Several studies point to the numerous mistakes children and adults make in the use of the written past participle agreement (Kilcher-Hagedorn et al. 1987, Lucci and Miller 1994, Brissaud 1999, among others). Kilcher-Hagedorn et al. (1987) show that elementary school children take into consideration only the linear order of words, concentrating on the position of the noun and therefore failing to recognize the direct object pronoun as trigger of past participle agreement. For high school students, Brissaud (1999) shows that past participle agreement is low with the correct element (the preverbal direct object pronoun) and that there are numerous mistakes, showing overgeneralisation of this agreement: past participle agreement with the subject, with the closest (post-verbal) noun or no agreement at all.

Following these results, and coming back to the difference between inconsistent input (triggering regularisation by children) and variable input (triggering similar variability in children’s output), we conclude, based on children’s behaviour in our elicited production task and on previous studies, that past particle agreement is a type of inconsistent input. This input is regularised by younger children in the form of non-agreement and later learned in school as a normative rule. More data are needed, especially a larger population sample.

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References


