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Abstract

In this study we tracked the development of the passé composé in second language learners of French whose first language is English. Although the passé composé is a highly used tense among native speakers of French, and appears to present particular difficulty for first language English speakers, its second language development has been surprisingly under-researched. In order to trace developmental patterns of the passé composé we obtained a corpus of obligatory context use of this tense by 30 Year 12 (lower-intermediate) students at two time points six months apart and analysed the data both quantitatively and qualitatively. Our findings suggest that these students used remarkably few memorized formulas, that they passed through five distinct stages in their acquisition of the passé composé, that those early stages were characterized by transfer errors, and that the presence of the auxiliary, whether correct or incorrect, formed a crucial stage in the development of the tense. Theoretical explanations for the findings are presented together with some tentative pedagogical implications.

Introduction

Considerable research effort has been dedicated to establishing how different grammatical features develop in learners of a second language (L2). A number of objectives of this research seem to have particular importance for foreign language teaching, namely:

(1) whether regular features of the L2 are acquired differently from irregular features (Herschensohn, 2003; Pinker, 1999). There is some evidence that learners develop their interlanguage via both rote learning (associative behaviour) of irregular forms and pattern-building (rule-governed behaviour of regular forms);

(2) whether development of grammatical features, in instructed settings, involves a 'u-shaped process', beginning with a knowledge of formulaic phrases ('associative knowledge'), resulting in production which is correct but limited. As the learner gradually starts to analyse such formulaic phrases, errors appear in the learner's production, perhaps caused by transfer from the L1 or by over-generalization of grammatical rules (see below). In the final phase of the u-shaped process, there seems to be a return to the production of correct phrases which are more rule-governed, flexible and transferable (Myles, Hooper and Mitchell, 1998; Myles, Mitchell and Hooper, 1999; Weinert, 1995);

(3) whether errors manifested in the L2 are more likely to be caused by inappropriate transfer from L1 (Lado, 1957; James, 1998) or whether errors are more likely to be the result of the learner hypothesis-testing, and therefore sometimes over-generalizing, from information already collected about the L2 (Dulay and Burt, 1974).

Some of these areas of interest have presented themselves in the literature describing the development of the Perfect Tense, the focus of the present study. Before examining this literature, we give a description of the French passé composé (PC) and its relationship to past tenses in English

.

The Passé Composé

The PC is a very important tense in French as it is the main vehicle for expressing completed past temporality. It is the only tense of this sort used in oral communication by native speakers (Schlyter, 1996) and in informal writing it is used in preference to the Past Historic, which is really only used in formal fictional writing. Newspapers tend to report events using the PC.

To describe a past completed action in English one verb is needed in the past simple form 'I went', and two verbs are needed in the perfective form, 'I have eaten'. In French, if a speaker needs to generate the same verb phrase ('je suis allé'), two verbs are needed for the perfective form, the auxiliary ('être') and the past participle ('allé'). One verb is needed for the Past Simple, 'j'allai', but as we have indicated this is not used in oral communication. In other words, the historical development of the PC has meant that it has both a truly 'perfective sense' – as in 'maman, Pierre est arrivé, tu peux lui ouvrir la porte?' – and an 'aorist sense'- as in 'Pierre est arrivé à sept heures, et il s'est lavé avant de sortir', where the PC is being used to foreground the narrative development of the text. In other words the PC in French covers two meanings that English conveys through two different forms ('has arrived' and 'arrived'). This difference between the two languages may result in problems for English speaking learners of French wishing to express completed action.

The PC is even more difficult to acquire for an L1 English speaker because of its structural or morphological complexity. Compare a female English speaker wanting to write that she, along with a female friend, washed in the river whilst on a camping holiday: '*we washed* in the river' with what a French person would have to write: '*nous nous sommes lavées* dans la rivière'. In the English construction there is only one morphological change from the infinitive (the 'ed' on 'wash'). To express the phrase in French, however, the speaker would need to consider the following:

1. The auxiliary has to agree with the subject both in terms of person and number
2. The auxiliary has to be correctly chosen in order to match the main verb.
3. If the main verb is reflexive it takes être and needs to mark reflexivity with the one of five reflexive pronouns.

4. There are three regular forms of past participle endings.
5. There are a large number of irregular verbs. An intermediate learner would be expected to master approximately 30 irregular verbs, whose frequency is judged to be fairly high. In the case of irregular verbs, past participles almost certainly have to be learnt through associative mechanisms rather than rules.
6. The past participle (whether regular or irregular) is inflected for gender and for number when the main verb takes *être*, but not with *avoir* – lavées

We hypothesize that for the phrase 'nous nous sommes lavées' to be written by an L2 learner, a very large number of conscious mental operations need to be made if the writer is trying to generate the PC by using the rules of French. Note also that in *oral* input many of these morphological features are not easily identified, or may indeed be imperceptible, such as past participle endings for gender and number. Thus mere exposure to oral input in the classroom is unlikely to provide learners with the morphological information needed to acquire the rules by inductive processes. As we shall see, one of the aims of this study is to determine whether lower-intermediate students are in fact trying to deploy the mental operations needed by the rules of the language, whether they are simply and erroneously transferring from the L1 and/or whether they are following the u-shaped process described above. If the latter process is involved, the following might be one of the possible development routes (for a male learner) for the concept 'I washed':

je me suis lavé (formulaic/associative)->
*je lavé (generated transfer from L1) ->
*j'ai lavé (over-generalization)->
*je suis lavé (incomplete application of auxiliary rule) ->
je me suis lavé.

Studies of past tense development in French

One of the largest studies of L2 verb phrase development in naturalistic settings (Dietrich, Klein and Noyau, 1995) focused on the development of tense usage among

adult migrants of five European languages, including French. Klein, Dietrich and Noyau (1995) concluded that learners, across all the five languages studied begin by marking temporality through time phrases (e.g. 'Sunday morning') rather than through verb inflection. As learners develop, various morphological forms, both correct and incorrect, seem to co-exist, with slow and gradual development towards correct usage rather than a sudden grasping of the correct form by the learner. In addition, irregular morphology seems to develop before regular morphology. Klein et al. (1995) comment that this last finding suggests that learners are not applying rules for past tense formation but instead generalizing from individual items in their input. They add that, as past tense markers of irregular verbs are perceptually more salient than is the case for regular verbs, they may be easier for learners to acquire.

In naturalistic settings, therefore, it appears that learners are essentially over-generalizing from current L2 knowledge rather than applying explicit rule-knowledge. Is this the case in more formal instructed settings? Herschensohn (2003) tracked the development of verb acquisition of two learners of French aged 16 over a six month period, one in an instructed context, the other living abroad with a French family after a period of classroom instruction. Whilst she found evidence of faster growth of present and past verb forms for the student in the naturalistic setting, both students produced infinitive forms rather than tensed verbs, and both regularized irregular forms. She claimed to have found evidence for both associative and systematic pattern-building forms of learning.

In a study of adult Swedish learners of French, Schlyter (1996) identified an initial stage where the past was marked by past-participle like forms without an auxiliary. However, these could simply be present tense derivations (e.g. *il fait; nous commence)*. Likewise, Labeau (2002) noted that some university students of French used the present tense instead of the PC, in isolated instances, which she describes as a 'default' form for the past tense. In addition, she claimed that students showed instances of over-generalization: adding agreement where none was needed; overuse of reflexives, regularization of irregular verbs. Unlike Klein et al (1995), however, she did not find that irregular verbs were acquired before regular ones.

Studies of PC development in UK settings are limited. One, by Metcalfe, Laurillard and Mason (1998), used stimulated recall to elicit students' reasons for using certain verb forms in a series of written tests. These forms included using the infinitive instead of a past participle in '*j'ai jouer', which a student justified by explaining that, as the phrase preceded 'au cricket', a 'vowel clash' should be avoided. Another common form used was '*je suis aller', which, the authors argue, might arise because of its similarity in sound with 'je suis allé', or because students were using the infinitive as a 'default' form. There therefore appeared to be some systematic variation within participants.

The second study, by Macrory and Stone (2000), analyzed the spoken and written language of 10 students from year 10 (14 year olds) which they followed through into year 11 with a specific focus on the PC. They found considerable amounts of within-subject variability, but also frequent absence of an auxiliary when the PC was used. Where an auxiliary was employed, its choice seemed to be influenced more by the subject pronoun being used than the type of verb. The presence of an auxiliary (and a correct auxiliary) was more likely to occur in the first person than in third person, suggesting (to us) the influence of memorized formula. The authors also appear to be hypothesizing that subjects in their study were formulating from the English Perfect tense to the French PC. We shall return to this issue in our discussion section.

In sum, studies of the French verb-phrase have provided evidence of both rule-governed behaviour and associative mechanisms coming into play, such as correct formulas co-existing with incorrect forms of the same element. In both naturalistic settings and instructed settings, acquisition of the verb-phrase appears a slow and uneven process, with complex patterns of systematicity and variation, possibly resulting from the deployment of both these rule-governed and associative mechanisms. This slow and uneven process is particularly manifest in the acquisition of the PC, probably due to its morphological complexity but additionally perhaps due to its function-form transferability problems from other languages, in our case English. Additionally, studies of the PC have suggested that learners begin their acquisition of the tense with an absence of the auxiliary, and that how use of the auxiliary develops is an area that warrants further investigation.

The present study

Studies on the development of the PC in formal instructed settings are, as we have demonstrated, still relatively few, especially in the UK context. The present study aimed to fill this gap by examining a corpus of PC written data from year 12 learners of French, gathered at two points six to seven months apart, in order to see what kinds of morpho-syntactic developments occurred.

When considered in the light of our theoretical framework (see above) the investigation into PC development was broken down into a number of specific research questions:

1. What is the role of the auxiliary in the acquisitional patterns of the PC verb phrase?
2. Is there evidence that regular and irregular past participles undergo different developmental patterns within the PC verb phrase?
3. Are there any consistent developmental patterns, and can learners be grouped into separate stages of PC acquisition?
4. What patterns of interlanguage variability in relation to the PC are present at the start and end of a six month period of exposure to French?
5. What evidence is there of formulaic use over the period examined?

Method

Population and Sample

Our population was year 12 students in England, in state maintained schools. Year 12 is a post-compulsory phase of education and students had chosen to study French beyond the five to six years of compulsory study [1]. Our sampling frame was limited to the Midlands and the south of England because of resource limitations. Nevertheless we determined to

collect data from a variety of geographical and socio-economic environments. Thus our four schools included one in the suburbs of a large city, one in an inner city with multi-ethnic backgrounds, one in a rural setting, and one in a small town.

Our sample consisted of 30 students, five male and 25 female, reflecting the disproportion in the population. Students were aged 16 to17 years. At the beginning of the study, they had just taken the national end of compulsory schooling examination, the General Certificate in Secondary Education (GCSE). All but one student in the sample had achieved one of the top three grades in this exam. Students in the sample had studied French for five years and typically would have received two to three hours of French instruction per week during that time. Most French course books that are used in England introduce learners to the PC during the second year of study. In Year 12, the number of hours of French instruction received by students would typically be four to five a week. Thus between the start and end of the project, our subjects would have received a total of 100 to 140 hours (approximately) of instruction [2].

The data

The data were collected by administering two similar writing tasks (see Appendix), one in October, two months into their course (henceforth Time 1) and one 6 months later (henceforth Time 2). Students were given a series of pictures outlining a story and were told to write in the past tense and in the third person. They were asked to write about 200 words. They were allowed 30 minutes to complete the task. The tasks were chosen precisely because they were *not* the types of tasks that students would be expected to undertake between the two time points. In other words we were interested in the development of the PC irrespective of task-type offered in the instruction so as to avoid as much as possible a task-related effect.

Teaching methods

In analysing these data we were aware that we were not able to account for, and certainly not able to control for, different teaching methods or amounts of teaching between Time

1 and Time 2. Instructional impact was not the aim of this study. Our interest in collecting and analysing these data was in observing how these students developed, if at all, their use of the PC regardless of amount of relevant input and instructional type.

Instruction in the years prior to year 12 would have been characterized by extensive learning of formulas (particularly in the first person singular), as suggested by other studies researching in the UK (see above) and as evidenced by rote learning of conversation responses for the oral exam at GCSE.

Analysis

Two researchers, both near-native speakers of French, analysed the data, each taking the scripts of half of the sample of 30. 10% of the scripts were analysed 'blind' and findings compared. Areas of disagreement were discussed and overcome. In this analysis, the researchers identified in the data attempts at the PC. The total number of attempts at Time 1 and Time 2 was calculated and found to be 720 (sum of both Time 1 and Time 2). Attempts at the PC were identified by establishing in the essays where an obligatory PC context occurred.

This total of 720 provided a mean number of attempts per student of 15.44 (SD, 8.7). At Time 1 PC attempts numbered 360; At Time 2 there were also 360 attempts at PC. This is an astonishing coincidence but a coincidence nevertheless.

The attempts were then analysed for certain features, as shown in Table 1, cross-sectionally at both time points and longitudinally between Time 1 and 2. A qualitative analysis of students' scripts was also made.

The alpha level for the quantitative analysis was set at $p < .05$.

INSERT table 1 about here

Results

Research question 1. What is the role of the auxiliary in the acquisitional patterns of the PC verb phrase?

Within this research question, we wanted to explore the following areas:

i) presence of auxiliary and correct use
ii) strength of association with subject or main verb
iii) effect of presence of auxiliary on correctness of past participle

i) presence of auxiliary and correct use

First we explored the presence, in general, of the auxiliary in the corpus. The total number of PC tokens where the auxiliary was absent was 352. From Table 1.3 we can see that the percentage of PC tokens where the auxiliary was present increased from Time 1 to Time 2 (44.2% to 58.1%). A chi-square test showed that this change over time was significant (χ^2= 13.89, df=1, *p*= .01*).

With the increasing presence of the auxiliary over time, however, came a slight decrease in its correct use, in terms of appropriate choice of avoir or être (Table 1.6) . However, this development was not statistically significant.

ii) association of auxiliary with subject or main verb

First we explored whether the presence or otherwise of the auxiliary was linked to whether the subject was a full noun phrase (e.g. le grand-père) or whether it was in the form of a pronoun. If learners used an auxiliary more often when they used a pronoun than when they used a noun, then this would suggest associative (formulaic) learning with learners more likely to meet PC phrases using pronouns in class than all the different possible subjects of the phrase.

Our results showed that when the subject was a pronoun, the auxiliary was present 54.5% of the time. When the subject was not a pronoun, the auxiliary was present 51% of the time. This difference was not statistically significant. The qualitative analysis of the data also revealed no clear pattern among students regarding whether presence of the

auxiliary was influenced by what form the subject took. For example, when Student 15 at Time 1 produced verb phrases with a stated subject, the auxiliary was sometimes present, sometimes absent: *le grand-père et son petit-fils sont quitté le train; la grand-père allé a un bar.* The same was true in verb phrases with a pronominalized subject: *il a trouvé* ; *il accroché sa veste*

We then explored whether learners seemed to be choosing the auxiliary on the basis of the subject of the verb rather than on the basis of the main verb type (as Macrory and Stone, 2000 had found) - in other words, whether the auxiliary had a stronger association with the subject than with the main verb. At both Time 1 and Time 2 the auxiliary matched the subject (Table 1.5) more than the main verb (Table 1.6) suggesting a stronger psychological association with the subject than with the main verb. We measured development over time and found that the association between verb and subject decreased over the period (matching the subject 98.1% at Time 1, to 92.9% at Time 2). In order to see if this development was significant we separated the data into Time 1 and Time 2. A chi-square at Time 1 was significant in favour of the auxiliary matching the subject (χ^2= 8.63, df=1. *p*= .01*), whereas it was not significant at Time 2 (χ^2= 1.63, df=1, *p*=.2). In other words, statistically, the association between the subject and the auxiliary decreased significantly. We interpret this finding as signalling a possible psychological shift over time towards the auxiliary being associated more with the main verb and less with the subject of the verb phrase.

iv) effect of presence of auxiliary on correctness of past participle

We then investigated whether, when the auxiliary was present, the past participle was more often correctly formed than when the auxiliary was absent. If this was the case, a possible explanation might be that the presence of the auxiliary had been triggered by a two-verb rule in the head of the learner, contrasting it with the one verb rule of English (see above). This in turn, might lead the learner to make connections with previous examples in the L2 input. In essence the learner might be beginning to 'think in French' rather than transferring from English. Our results showed that when the auxiliary was present, the past participle was correct in 81.3% of the cases. However, when the auxiliary was absent, the past participle was only correct in just under half (47.6%) of

cases (Table 1.9). The result was statistically significant (χ^2= 87.62, df=1, *p*= .01*). Moreover, as we can see from Table 1.9, when at Time 1 the auxiliary was absent, the past participle was nevertheless correctly formed over half of the time. However this changed over the time period with the proportion of auxiliary absent with correct past participles decreasing from 53.4% to 41.8%. This decrease was significant (χ^2= 4.84, df=1, *p*= .05*).

A qualitative analysis of the data provided further evidence that the presence of the auxiliary was a key element in the development of PC use. At Time 1, students appeared to form four distinct categories:

Group 1, who never omitted the auxiliary (four students);

Group 2, who omitted the auxiliary infrequently, in fewer than 40 % of obligatory contexts (six students, with four students supplying the auxiliary over 85% of the time);

Group 3 (17 students) who used the auxiliary very occasionally (no auxiliary in 50% or more contexts, with ten students omitting in over 80% of contexts); and

Group 4, in whose writing the auxiliary was never present (three students) and who marked the perfect tense with a mixture of the lone past participle, the present tense and the infinitive. In this fourth group, two of the three students also produced verbless sentences, e.g. '*Alors le voyage en train à la maison'* (= *Alors ils sont allés en train à la maison*, so they went home by train).

In addition, within Group 3, there were two sub-groups of students. While both groups usually omitted the auxiliary, one group, 3A (10 students), mainly used a lone past participle to indicate the perfect tense, doing so in over 50% of instances. For example (Student 17) : *Ils visité un bar et Peter ordonné un boisson d'alcool...*

The second group, 3B (seven students) used the past participle in fewer than 50% of instances, indicating the perfect tense through the infinitive, or through a present tense-like form, with only an occasional past participle:

Student 22 : *...ils reste sur le grass et finalement les grand-père et le petit fils promenade à la station de traîne. George est très soûl. Il demander 4 billets....*

In the two groups of students whose use of the PC seemed to be the most advanced (groups 1 and 2), the link between presence of the auxiliary and correct past participle formation seems to be confirmed (see Tables 3 and 4). For Group 2, there is an increase in both areas between Times 1 and 2, while the slight dip in both areas for Group 1 may be explained by a ceiling effect of their very high level of correctness for auxiliary and past participle at Time 1.

INSERT Tables 3 and 4 here

Within the overall trend of increased use of the auxiliary accompanying increased accuracy of the past participle, however, there were some exceptions. For example, Group 3A students rarely used an auxiliary at Time 1 (in 24% of contexts across the group), but still had high levels of accuracy in the past participle at that time point (average of 69% correct past participles across the group) and indeed used this as the main method of indicating a past tense (e.g. Student 17, above).

Nor did all students show a uniform development in both auxiliary and past participle use, even though by Time 2 there was an increase in both auxiliary use and past participle correctness in the sample as a whole. For the majority of students in Groups 3 and 4, the association between auxiliary and past participle development was not so evident. Three students, all from Group 3B and thus past participle 'under-users' at Time 1, increased the frequency and accuracy of the past participle without any real corresponding increase in auxiliary use. Indeed, one of them used no auxiliary at all at Time 2, even though she had at Time 1. By contrast, a group of five students increased their use of the auxiliary between Times 1 and 2 without a corresponding increase in the accuracy of their past participle use: four students from Group 3A and one from Group 4. In only one case did this seem to be attributable to students being more adventurous in the verbs they used. Two of this group tended to use a form of the present tense as a replacement for the past participle: *Ils ont arrivent ; les adultes ont voient* (Student 16) *; Le guide a explique ; j'ai decide de lu* (Student 15).

Research question 2. Is there evidence that regular and irregular past participles undergo different developmental patterns within the PC verb phrase?

Overall there were 67.8% regular verbs and 32.2% irregular verbs in the data. As we can see from Tables 1.1 and 1.2, there was a slight increase in the use of regular verbs at Time 2 ($\chi^2 = 4.99$, df = 1, p=.05*). This may simply be due to the requirements of the task.

Our analysis concentrated on the following feature in the data:

i) the proportion of correct past participles (PP) at each time point

ii) the effect of a verb's regularity on likelihood of its correctness

iii) the effect of a verb's regularity on choice of auxiliary

i) proportion of correct PP at each time point

From Table 1.7 we can see that the proportion of correctly inflected past participles decreased slightly over the time period but this was not statistically significant.

ii) the effect of a verb's regularity on likelihood of its correctness

A further analysis was concerned with whether regular or irregular verbs were more likely to produce correct past participles at both time points. If irregular verbs were more likely to be used correctly, then a possible explanation might be that such verbs are more frequent in the input that learners receive and that they are more clearly different from regular verbs. Pinker (1999) would argue that this is what has made them irregular in order for them to be more easily distinguishable in oral input. By contrast, regular verbs require the application of a rule. However, in our data, as we can see from Table 2, the past participle was correct in almost equal proportions whether the verb was irregular or not. The difference was non- significant. .

iii) the effect of a verb's regularity on choice of auxiliary

We then explored whether the regularity of the verb had an effect on the correct choice of auxiliary. If so, then a possible explanation might be that in the case of irregular verbs they have been learnt entirely as formulas. As we can see from Table 2, the auxiliary was correct 96.7% of the time when the verb was irregular whereas it was only correct 76.2% of the time when the verb was regular, a difference that was statistically significant. However another possible explanation for the greater accuracy of the whole verb phrase

with irregular verbs may be that, where there are clear differences between the perfect and present tense versions of a verb (as would be the case with irregular verbs), then learners are likely to 'notice' this difference and remember the perfect tense form for such verbs more easily (see Bardovi-Harlig, 2000). Moreover, there is some evidence from the qualitative analysis of the data that learners were more likely to use an auxiliary with verbs that they perceived as 'different' in some way, rather than just irregular. Thus some were more likely to use an auxiliary for verbs that they believed took 'être' in the perfect tense. This was particularly noticeable among students who at Time 1 used the auxiliary only rarely, perhaps only once or twice, but when they did, it was often with verbs that take être, particularly 'aller', or with verbs which they believed took this auxiliary.

Research question 3. Are there any consistent developmental patterns, and can learners be grouped into separate stages of PC acquisition?

Our qualitative analysis of PC tokens produced by individual students provided evidence to suggest five stages in the development of the PC. The stages (illustrated with examples from our data) are clearly characterized by the presence or otherwise of the auxiliary:

(1) A basic stage. Here the auxiliary is never used. The perfect tense is marked by a mixture of a lone past participle, a present-tense like form, and the infinitive (e.g. Student 6, Time 1: le grandpere arrivé; le grandpere porurchasser; ils depart à dix heure); There may be a few verbless sentences where the learner appears to rely on the context to convey past temporality This may simply be because the learner did not know the verb and did not wish to use an avoidance strategy.

(2) A pre-auxiliary stage. The auxiliary is used in only one or two tokens. Where it is used, verbs construed by the learner to be verbs of 'movement' or reflexive verbs are more likely to be given an auxiliary. Particularly, the verb 'aller' is more often used with an auxiliary than without one, and frequently used correctly. The PC is still marked by a mixture of lone past participle, a present tense-like form, and the infinitive. A form resembling the present tense is used especially with plural subjects. For example, one student, who at Time 1 never used the auxiliary did so on four occasions at Time 2. In

each case the auxiliary was (incorrectly) 'être': *Paul et Julie sont s'inquiéter; il est disparu; Paul sont entré; les famille sont passent.*

(3) An auxiliary development stage. The auxiliary is used more frequently, if still less than half the time. The lone past participle is still the main way of marking the perfect tense. However, the proportion of infinitive and present tense-like forms is decreasing.

(4) A fixed auxiliary stage. The use of the auxiliary increases to the point where it is present most of the time, but correct choice of auxiliary and agreement of past participles is variable. Past participles may not be correct but are almost always inflected in some way.

(5) A PC acquired stage. The use of the auxiliary is always present except, perhaps, in complex phrases involving preceding direct objects and the past participle is always correctly formed (unless it is an infrequent irregular) although it may not have appropriate number or gender agreement.

The qualitative analysis also provided some evidence of systematicity in the way in which individual students tried to mark agreement and at the same time provided evidence of the role of formulas. Student 1 had high levels of auxiliary and past participle accuracy at both Times 1 and 2. At Time 1, however, she did not mark agreement in cases where it was required: *ils se sont levé trop tôt*. This would suggest application of a formula resulting from oral exposure and practice. At Time 2, she seems to show increased awareness that an agreement is sometimes necessary, but marked this always with a feminine singular ending whilst at the same time providing incorrect auxiliary in some cases : *Bob et son famille ont allée*; *ils ont arrivée* ; *elle a commencée'*; *ils ont commencée*. Furthermore, in students who generally omitted the auxiliary there was evidence of attempts to mark agreement by 'pluralising' the attempted past participle: Student 15, Time 1: *ils randonnées; ils atteintes*; Student 18: Time 2 - *ils pensées, ils joues.*

We also examined the corpus qualitatively for the appearance of formulaic uses of the PC. We felt reasonably comfortable in inferring that formulas would manifest themselves within individuals at time 1 as one or two correctly formed (at least phonetically if not orthographically correct) phrases among overwhelming examples of

incorrectly formed phrases where the auxiliary was often absent. Of the thirty students, we observed *only* eight to use *one or two* correct phrases (at least phonetically correct) among many examples of incorrect phrases. Examples of these are :

Student 15: *L'homme lui a donné*
Student 29: *Il a bu, il a acheté*
Student 14: *j'ai pensé*
Student 13: *ils sont allé* (three times)

Summary of results

Developments over time for this corpus of PC attempts can now be summarized. At time 2:

1. PC attempts with an absent auxiliary decreased;
2. It appears that the association between the subject and the auxiliary decreased and was replaced by a stronger association between auxiliary and main verb;
3. PC attempts where the auxiliary was absent but the past participle was correct decreased.

Additionally, by examining associations within the corpus as a whole, the following tendencies were observed:

1. When the main verb is irregular, the auxiliary is more often correct than when the verb is regular;
2. When the auxiliary is present the past participle is more often correctly formed than when the auxiliary is absent;

We thus formulate a main hypothesis that the main development of the PC, within the corpus, is in the presence of the auxiliary rather than in producing a correct past participle, and a psychological shift away from an association with the subject of the verb phrase and towards a focus on the properties of the main verb. In this hypothesis the auxiliary plays a very important part in what we have observed to be a 5-staged development of the PC.

Discussion

We will now relate the findings to the areas of theory which we outlined in the introduction and to previous literature. In other words, we will group together the findings in relation to rule-governed versus associative behaviour, to regular versus irregular verbs, to the use of formulas versus verb phrase generation, and to transfer from L1 errors.

One of the most remarkable findings was that so few students used clearly identifiable memorized formulas of the PC. It is remarkable because of the type of instruction they had received in the previous five years which was likely to be characterized by a rote learning of verb phrases (see Introduction). Instead, learners, within our time period, seemed to pass through the five stages in the development of their PC use, although as we have shown, not all students were at the same starting point at Time 1 and not all had reached the same stage by Time 2. Yet we would also argue that they did not pass through these stages as the result of explicit instruction on the PC, as we are confident that there was none, or very little, between the two time points. So what was the overall pattern of development, as suggested by our 5 stages due to?

It seems clear that students were transferring, in the early stages, from their L1 to their L2, by using lone past participles. If this is true, then there is a theoretical issue raised earlier that now needs to be looked at in greater detail. How exactly were they transferring from L1, given the concept-form mismatch between English and French? As we mentioned earlier, Macrory and Stone seemed to suggest (following Judge and Healey 1983) that their learners were transferring from the English perfective to the PC and that this should present little conceptual difficulty (Macrory and Stone 2000:62). We would argue that, in our study, it is quite unlikely, that the English perfective was being activated in order to put across past tense action. Our sample were generating from L1 concepts such as ‘he drank’ rather than “he has drunk’. In other words, when discussing transfer problems from English to French we should be looking at production errors which may be resulting from the English past simple to the French PC – the function to

form mapping problem we discussed earlier. We would argue that the presence of the auxiliary marks the transition from transfer to L1 to a new stage where transfer errors and over-generalization errors are in free variation before the eventual consolidation of the PC at stage 5.

This hypothesis would explain why there was so little evidence of formulas being used. It is possible that when the stage 1 or 2 learner wanted to generate past action (which in English only needs one verb), the transfer from L1 was too strong to generate a verb phrase containing an auxiliary no matter how often that learner had been exposed to it in the input or encouraged to use formulas in the output. It may also be that these learners had, up until now, been exposed to and used the perfect tense predominantly in the first person singular form and not in the third person as our tasks required (and as argued by Macrory and Stone, 2000, for their sample). The frequency with which they resorted to a version of the present tense for plural subjects, instead of using a plural auxiliary, would seem to support this argument.

Evidence that PC use was certainly not *highly* associative (i.e. learnt as a formula) was also provided by two findings. Firstly, irregular past participles were not necessarily more correctly formed than regular ones, as an associative theory would suggest. Secondly, over the time period, the match between the subject and the auxiliary decreased and the match between the auxiliary and the main verb increased. In the early phases of the generative development of the PC the auxiliary was perhaps not being construed as an auxiliary at all, but as a present tense of the verbs *avoir* and *être*, possibly because of the heavy focus on the present tense in earlier pedagogical topics such as describing self, family and friends. As the development occurred, the auxiliary's link with the present tense became less strong and this may account for its decreasing association with the subject of the verb phrase. In other words, the more the PC is developed, the more the learner focused on the main verb to trigger the necessary changes in the other constituents of the PC verb phrase. As we have seen, when the auxiliary was present the main verb was also more often correctly formed that when it was absent.

All these assertions are, of course, tentative and each one would have to be tested individually in a more controlled experiment. However, even this exploratory description suggests that the role of the auxiliary is crucial in the development of the PC verb phrase.

Limitations

It became clear with hindsight that two time points were not sufficient to capture the full development of the PC. We were however constrained by institutional factors. Three time points would have provided more complete data particularly if point 1 could have been the learners' first encounters and uses of the PC.

A larger sample of students would have meant that we could have carried out a larger number of statistical tests with the student as the unit of analysis as well as analysis of attempts at PC as a whole.

Conclusions and Implications

Firstly, readers may be surprised by our findings that, a few months after GCSE and 3-4 years after being introduced to the PC, two thirds of the sample were still at the 'pre-auxiliary stage' and some students producing unrecognizable PC verb phrases. We argue that it is possible that this lack of acquisition of the PC is linked to our lack of understanding of how the PC verb phrase develops in classroom settings where English is the L1.

The developmental patterns found in our sample do not match those found in naturalistic settings, where interlanguage development seems to be little influenced by L1 transfer. Our data suggest that, in the case of the PC, formula-based teaching does not lead to the gradual unpacking of the formula (as in the case of the present tense – see Myles et al. 1998) but to learners resorting to L1 transfer. Because of the particular concept-form mapping transfer problems from English to French, it seems that a *psychological shift* has to occur in the minds of the learners so that they begin to formulate a two-verb verb phrase for the PC.

Yet, there is no evidence from our findings to suggest that the PC should be taught simply by giving an explanation of the rules. Even though they are invariate, the rules are too many and too complex. Form-focused input would probably do no harm and may prepare the learner for the psychological shift. However, given the role of the auxiliary, it may be that the first psychological shift for English learners of French is in prompting themselves to use two verbs in the past tense until this conscious prompting strategy becomes an automatic process. The two verb stage should perhaps be a more important instructional focus than accuracy of either the auxiliary or of the past participle. It is possible that agreement of the past participle should also be left for later. Our limited study suggests that it is in developing the continued presence of the auxiliary that lies the key to the development of the passé composé and this should be confirmed by further research.

Notes:

1. In 2004 changes were made to the curriculum in England which mean that it is no longer compulsory to study a foreign language beyond the age of 14. Participants in this study, however, would have been obliged to study a language up to the end of compulsory schooling.

2. The writing of a student gaining a grade C would be characterised by the ability to **'**express personal opinions and write about a variety of topics, both factually and imaginatively, including past, present and future events and involving the use of different tenses.' (Edexcel, 2003). Their style would be basic and not without error but the message would be clearly conveyed. An A grade student would be expected to use a similar range of tenses and write on similar topics, but in addition 'produce longer sequences' of writing and their spelling and grammar would be 'generally accurate' (Edexcel, 2003).

Table 1. Overview of data in corpus.

Total attempts at passé composé, N=720

	Time 1	Time 2	Total in corpus
1.1 Verb is regular	230 (63.9%)	258 (71.7%)	67.8%
1.2 Verb is irregular	130 (36.1%)	102 (28.3%)	32.2%
1.3 Auxiliary is present	159 (44.2%)	209 (58.1%)	51.1%
1.4 Auxiliary matches subject and main verb	137 (86.7%)	168 (80%)	83.3%
1.5 Auxiliary matches subject	155 (98.1%)	195 (92.9%)	95.5%
1.6 Auxiliary matches main verb	139 (88.0%)	178 (84.8%)	86.4%
1.7 Past participle is correct	243 (67%)	227 (63.1%)	65.0%
1.8 Auxiliary and past participle correct	120 (33.3%)	137 (38.1%)	35.7%
1.9 Past Participle correct with absent auxiliary	110 (53.4%)	66 (41.8%)	47.6%

Table 2 Effects of verb regularity

	regular verbs	irregular verbs
correct auxiliary	189 (76.2%)	116 (96.7%)
incorrect auxiliary	59 (23.8%)	4 (3.3%)
past participle correct	322 (66.0%)	148 (63.8%)
past participle incorrect	166 (34.0%)	84 (36.2%)

Table 3 Auxiliary present in groups of students (percentage of PC attempts)

	Time 1	Time 2
Group 1	100	87
Group 2	82	97

Table 4 Correct past participle in groups of students (percentage of PC attempts)

	Time 1	Time 2
Group 1	94	85
Group 2	88	90

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