

CHAPTER 4

Temporal Relations in Learner Varieties: Grammaticalization and Discourse Construction

Colette Noyau

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Introduction

Works on temporality in the field of language acquisition have progressed considerably over the past few years, moving on from descriptions of the linguistic structure of learner varieties towards a more general concern for their dynamic nature, i.e. their developmental structure and factors relating to their restructuring. As far as the study of temporality is concerned, it has not only been a matter of looking in more detail at the different contextual factors in the morphologization of aspectual and/or temporal notions, but also tackling the development of learner varieties within a textual perspective, looking at the construction of temporal structures in discourse. The reason for this is that morphologization is best accounted for within the context of discursive activities and their communicative constraints on referenciation. This is what I aim to demonstrate here, rather than concentrating on the actual detail of the different processes in the development of inflectional morphology.

Temporal relations in the early stages of language acquisition

Numerous works carried out in this area have shown how, in pre-basic learner varieties (i.e. before the use of morphological means), temporal relations are based on discourse organization (which is possible in structured texts) and, above all, certain lexical items:

- a) in relating situations¹, and supplying information concerning their inherent temporal structure ;
- b) in adverbs and other temporal expressions, fulfilling certain essential functions, i.e. :
 1. the localizing of situations in time by the use of adverbial expressions to indicate position, deictic or anaphoric reference, chronological time intervals (the use of calendar dates and other recognized times scales) or by the ordering of series of occurrences: *before* ; *Tuesday* ; *third day*
 2. the specification of other temporal features which affect situations : quantitative or qualitative specification of duration or reiteration: *always* ; *three months* ; *lots of times*
 3. temporal contrasting : the early or late nature of an event or event boundary vis-à-vis expectations ; types of transition from one state to another: *already* ; *(not) yet* ; *abruptly*, *suddenly*

The different means of expressing these notions appear regularly in a certain order in the productions of adult learners, regardless of the particular target language (TL):

1. Important temporal adverbs of position (TAPs) and adverbial expressions of duration/quantification of events come into place early on, whereas temporal adverbs of contrast (TACs, cf. Klein 1994) (*already*, (*not*) *yet*), which are conceptually more complex, appear later on.
2. Topological relations are present, then made explicit, before the expression of relations of order. Thus, for expressions involving chronological event order, the relation is, by default, one of concomitance: *Ø Christmas* precedes by far *after Christmas* or *before midday* e.g. *my husband the holidays*, *Morocco the accident*

This can be linked to a cognitive factor: the complexity of construction of implied temporal notions accounts for the emergence order, even in the case of adult speakers. The diversification of referential anchoring (deictic vs. anaphoric) appears later on. The adverbial series which predominates, in accord with the type of exposure to the language, tends to be overgeneralized, finding itself applied to values which normally require the other type of anchoring :

- for learners in a social environment: deictic anchoring adverbials are extended to anaphoric functions (Dietrich, Klein & Noyau 1995 ; Noyau 1991); *tomorrow* (= the following day), (*the*) *next N* (= the following N)
- for tutored learners : we see the reverse trend, i.e. overgeneralization of anaphoric anchoring: *after two days* (= the day after tomorrow)

This can be interpreted as the influence of the particular input on the structure of the linguistic development, and can be accounted for in two ways:

- as being due to the high frequency of use of such markers in the input and resulting increased access to these forms ;
- as being due to the lack of opportunities in which to make use of these functions in discourse.

Thus Garat (1996), in her longitudinal study of the development of temporality in personal and fictional narratives by young adult learners in a classroom context, concludes that the acquisition and use of forms in a manner that conforms to the TL depends greatly on the capacity to structure texts, and that the structuring of texts depends on the conditions of interaction of the exolingual communicative situation. The richer productions observed for fictional narratives without deictic marking by comparison to the personal narratives serve to illustrate that the grasping of these means by the learner is influenced by the type of exposure to the language, with the classroom environment favoring the acquisition of means for producing a discourse cut off from the moment of utterance. Moreover, several of these lexical temporal expressions are used by the learners as substitutes for grammaticalized temporal or aspectual notions. Thus in the case of the Arabic-speaking learners of French and German, utterances such as [*saje*] *cassé*, *fini* ('[that's-it] broken, finished') (French) and *fertig* *arbeite* ('finished work') (German), etc., allow, when the need arises, the expression of a morphology-free perfective aspect.

The prevalence of temporal adverbials in the acquisition of temporality by adult learners has given rise to different possible explanations. Hendriks (1999) observes that form-function mapping is facilitated by the use of adverbs : they have an invariable form (more easily accessed in memory), and map forms to functions in a way far more similar to that of the L1 than is the case for morphological means. However, more globally, she points out that

adult learners have a real advantage over child learners in the recourse to this strategy in so far as they know what adverbs are, how they are to be inserted into utterances and what their role is in the construction of discourse, thus making them a central part of an efficient communication strategy. Child learners, on the other hand, have an advantage as far as morphological means are concerned : by the age of four they have mastered the grammatical system (inflection and the use of particles) of their L1, but lack adverbs (cf. Schlyter 1990). Their disadvantage is a discursive one, i.e. they are yet to discover the ways in which discourse is constructed and the role adverbs play in the construction. Contrary to those works which demonstrate the efficiency of adverbs for adult learners in the expression of temporal notions in the L2, B. Ahrenholz (forthcoming) considers that temporal adverbials (in the type of learner texts he studies, i.e. instructions) have what is essentially a discourse-structuring function (macro-discursive function) rather than a temporal function : temporal relations between successive actions are either inferred or an adverb is used to indicate the beginning of a sequence of grouped actions.

We could say, then, that those learner varieties with a basic lexical inventory of adverbs and expressions for dealing with different types of temporal notions (position, duration, frequency, marking of time intervals) operate efficiently as far as communication is concerned, thereby making up for the absence of grammatical markers of temporality. It has been argued that the handling of this lexical repertoire can slow down the grammaticalization of temporality (Starren & Van Hout 1996). The argument is, then, that the inventory of notions that can be realised by temporal expressions, and the skilled use thereof in discourse, allow the speaker to fulfil the communicative task of referring to groups of events situated in relation to time or in relation to one another (which languages without grammatically expressed temporality do anyway using these same types of means). If communication needs alone are at stake then the move towards restructuring is not particularly strong.

With regard to the actual realization of these expressions in pre-basic and basic learner varieties, Starren (1996, Starren & Van Hout) analyses the use of adverbs in the informational structure of the utterances. Adverbials are used in two positions :

- in the topic component (TC), to signal the topic time (TT) - at the beginning of the utterance ;
- in the focus component (FC) to state the time of situation (TSit).

Thus an utterance can contain an adverbial in both the topic and the focus components thereby expressing, by lexical means, the relation TT-TSit, which is the very definition of aspect (cf. Klein 1994) :

e.g. TC [*gisteren jaar ik*] - FC [*altijd ongeluk gedaan*]
 last year I always accident did (=had)
 'last year I kept on having accidents'
 TC [*altijd hollandse mensen*] - FC [*avond freit eet*]
 always Dutch people evening chips eat
 'Dutch people always eat chips in the evening'

What is it, then, that pushes learners to acquire morphological means of marking temporality and aspect ? I will come back to this question, along with the answers which can be provided, in section 2, below.

Finally, concerning the stages in the pre-grammatical linguistic development, we must not forget that learners rely entirely on those contextualizing capacities that they themselves have developed in their L1, along with those used by their native interlocutors, to reconstruct

a part of the message using inferences based on either encyclopaedic knowledge, the preceding co-text, or shared knowledge (although perhaps not a blind trust, however, whence the redundant use of certain semantic features which has been remarked by numerous linguists).

Recent works concerning the pragmatic inferences of temporal relations have looked in detail at the semantic configurations leading to 'forward' (AFTER relations), 'backward' (BEFORE relations) or 'concomitant' (SAME TIME relations) inferences between contiguous utterances (cf. Moeschler, 1998 ; De Saussure, 1998). These works allow us to look more precisely at what happens when information concerning the temporal relations is given over to pragmatic inferences. Moeschler shows how, according to different languages, a given morphologically-marked tense leads potentially to inferences of consecutiveness whereas other tenses do not do this. Thus we see in French, in the case of the Passé Simple (strict perfective past value), the following :

- a) *Pierre poussa Max. Max tomba.* (= chronological order and inferred cause-consequence)
 'Pierre pushed Max. Max fell over'
Max tomba. Pierre poussa Max (du pied sur le sol). (= a different chronological order)
 'Max fell over. Pierre pushed Max on the floor (prodded Max with his foot)'

The Passé Simple necessarily implies consecutiveness. Therefore in b), an inference of the reversal of the chronological order is ruled out despite our personal experience telling us that the most likely scenario would be more along the lines of "pushing leads to falling." In b) the morphological cue is of prime importance, whereas the same passages in the Passé Composé, or in the Présent give the encyclopaedic knowledge of the likely scenarios the upper hand. However, the addition of an adverbial marker (e.g. 'previously') would dominate over the scenario, and even over the morphology, allowing an interpretation in terms of anteriority with the Passé Simple. These cues which trigger a particular temporal interpretation form a hierarchy. Thus, in the case of fully grammaticalized varieties, we find that morphological means of expressing temporality are used for temporal inferences. However, in early learner varieties, the remaining semantic cues alone are available, with, first and foremost, temporal adverbials, which are more important than the morphology even in stabilised varieties. This is why the strategy which makes use of adverbials is so robust.

De Saussure (1998), for his part, outlines in detail the manner in which utterances can either encourage or restrict the interpretation of "temporal encapsulation" (parts to whole relations) for a sequence of propositions expressing dynamic situations :

Pierre escalada le Mont Blanc. Il passa la nuit au camp de base. Il monta à travers une bourrasque de neige. Il planta le drapeau sous un ciel bleu éclatant.

'Pierre climbed up Mont Blanc. He spent the night at base camp. He went up through a flurry of snow. He put up the flag under a bright blue sky'

Thus in this example the situation indicated by the first proposition temporally includes the others subsequently referred to (despite the use of the Passé Simple). In such cases, even if all the verbs are in a narrative tense, we interpret what is said in terms of encapsulation, based essentially on encyclopaedic knowledge. The 'capsules' may or may not be temporally ordered, depending on each particular case. Let us move on, though, to look at the implications surrounding the construction of temporal information in learner discourse.

An adult learner has available to him/her discursive knowledge concerning interpretation principles and the relative weight of the different types of cues in the

construction of the temporal interpretation. He/she can rely, then, on the use of lexical means to express time intervals, on the one hand, and on his/her interlocutors' knowledge of the world on the other hand. Problems arise, though, when the lexical repertoire is found to be deficient (i.e. blanks or indecision, chiefly due to idiosyncrasies affecting grammatical words (prepositions) in adverbial expressions, confusion between deictic and anaphoric location, etc.), and/or when the experience content of the utterance is the opposite of that which is expected (cf. *Max tombe. Pierre le pousse* ('Max falls over. Pierre pushes him')). And thus we can see contexts which encourage the grammaticalization of temporality.

Emergence and gradual development of temporo-aspectual morphology

In the acquisition of a foreign language, morphologization, a complex process linking together different sub-processes, can be seen as being the following : a) a process involving the restructuring of the linguistic apparatus, which brings about the gradual reanalysis of the numerous allomorphs made up of a lexical stem + affixes, and, as a result, the reorganization of forms ; b) a process involving the organization of the morphological system, which produces a progression from lists of allomorphs to a pattern of regularly ordered rules comprising different degrees of generality (i.e. more or less local vs. global), and constituting increasingly more complex and more interrelated micro-systems ; c) a process of semantic differentiation, which aims at mapping functions and meanings onto individual affixes. Learners are faced with two problems involving the following :

- a) the identification of forms (i.e. problems to do with segmentation or with amalgamated forms, allomorphs of grammatical elements and discontinuous morphemes) ;
- b) the forming of forms-functions linkage hypotheses :

Which grammatical markers for which functions? The learner may form lexical hypotheses (a given affix is associated with verbal lexemes of a given semantic group), semantic hypotheses (a given affix expresses temporal relations) or discourse hypotheses (a given form is an indicator a given discursive structure, e.g. propositions belonging to the narrative foreground).

Given that the acquisition process is largely determined by available knowledge, notably in connection with L1 experience, we can expect that, once the morphological variation of verbs in the L2 has been identified, the temporo-aspectual morphologization of the L2 will take more or less time to come to the learner according to the typological distance between the L1 and the L2, with the learner seeking hypotheses in his/her linguistic experience via his/her L1. This, then, is how learners of aspect-dominant languages are slowed down as they try in vain to work out how, in a non aspect-dominant L2, aspectual notions can be expressed using verb morphology variation. And this is indeed what appears to hold back the coming into place of functional morphology in Arabic-speaking learners of French and Dutch (Dietrich, Klein & Noyau 1995). Thus the functional development of the verbal morphology in the productions of Abdelmalek (an Arabic-speaking learner of French) over three years can be shown as a series of steps (Noyau 1991, 1998): $H_0 \rightarrow H_1 \rightarrow H_a / H_t$ which can be interpreted thus : first a null hypothesis (non-functional internal variation), then a hypothesis on the inherent temporality in events (i.e. lexical), next an aspectual hypothesis (perfective / imperfective) and/or a temporal hypothesis (past / non-past), very similar to the previous hypothesis on the grounds of the available contexts, where, generally speaking, a past event can be seen as being perfective. Carol (1996, forthcoming) also found this

searching for means of expressing aspect in the L2 with French-speaking children learning German with a group of beginners. We should expect to see the opposite tendency with those learners whose L1 is a tense-dominant language, such as German, who are acquiring an aspect-dominant language like, say, Arabic (certain typologically interesting combinations of source languages (SLs) and TLs are yet to be studied).

Starren (forthcoming), more recently, prolonged her study of the organization of temporal information by ESF learners to the point where there appears to be a creative (idiosyncratic) grammaticalization, of an aspectual nature, in Arabic-speaking learners of Dutch. The fact that the skilled handling of adverbials in the topic or focus allows them to show aspect by lexical means could be favorable to the emergence of analytic aspect markers, i.e. proto-auxiliaries indicating an aspectual notion of perfect (TSit before TT), which would appear to be the proof of the emergence of aspectual grammar before tense grammar for these learners. This is what appears to surface in the retelling of films by these learners, who, at first, produced utterances of the following type :

TC [*dan politie*] FC [*komen*]
 then police come

then, at a later stage, to show aspectual value (perfect):

TC [*ik heb*] FC [*brood weg gehaald*]
 I have bread stolen

or the following, to show temporal value (past):

TE [*en dan toen was*] FE [*die meisje ook thuis gewonnen*]
 and then was the girl also at home found

These findings give rise to certain interesting points:

1. The emergence environments of the construction *heb ... ge-V* appear systematically to be in direct reported speech. Direct speech appears to constitute a context favoring the emergence of new functional TAM categories : as Hickmann in particular has shown, direct speech is an area in which we can find innovations in a learner variety before they become more widespread.
2. Do these precursors to TAM categories really allow a distinction to be made between tense and aspect, given that situations in the past (TSit concomitant with TT and before TU) can most frequently be envisaged as showing perfective aspect (TSit before TT and TT concomitant with TU) and either the aspect (i.e. perfect) or the tense (i.e. past) can be left to inference. The great difficulty in distinguishing, for example, between the H_a and H_t hypotheses in the productions of Abdelmalek is related to this problem (Noyau 1991, 1997).

In fictional accounts, the deictic past is not found (except in digressions or commentaries), the use of the past is a conventional solution, and the generalization of the type 'grammaticalized aspect before tense' could be considered applied to the data. This can be contrasted with the results (grammaticalized tense expression before aspect) of studies based on personal accounts which display deictic temporal marking in Dietrich, Klein & Noyau (1995). The distribution of morphological marking in the narrative foreground in Swedish for the Finnish learner Mari (Noyau 1991, 1997) shows a clear distinction between, on the one hand, conversational accounts displaying real-world temporality and, on the other hand, accounts of films : the adoption of the Preterite as a narrative tense proves to be effective for conversational accounts in cycle II, whereas in the film accounts we find the Supine (Perfect without its auxiliary), with the Preterite only being used as a narrative tense in film accounts

in cycle III. Equally, for Brum (study of tutored university level Brazilian learners of French, cf. below), "there is, then, a sort of time delay concerning the use of certain markers in between personal and fictional narrative accounts : V+[e] appears only in the third cycle of the FNs (fictional narratives) whereas, in the case of the PNs (personal narratives), it is used in the first cycle" (Brum 1997). It could be asked, then, whether such results do not in fact depend on the type of text (personal account vs. fictional accounts vs. conversation) in question.

Furthermore, if only a single marker is available to make the distinction between past and non-past, we can say that aspect is not yet grammaticalized. This is in fact what can be seen in the case of learners of French, whether they be native Arabic or Spanish speakers, who, right to the end of the three cycles of data collection, did not succeed in making the formal V-[e] structure a functional category, and for learners of Swedish, who do not succeed in making a distinction between the contexts in which the Preterite (general marker of the past) and the Perfect (less frequent in the productions) are used in the L2 to mark perfective aspect. Finally, there are a few more elements which can be added to the tense-aspect debate (cf. Andersen 1991, Andersen & Shirai 1994). To what extent do the results depend on the SLs, i.e. the fact that they can be more or less aspectual and more or less morphologised ? The influence of the L1 is striking in the study carried out by Dankova (1998), which presents two types of accounts (i.e. picture retelling based on images and accounts of personal experiences) produced by groups of speakers of three different languages (French, Italian and Russian) in Esperanto, and other groups of speakers of L1 French, Italian and Russian. She tests a hypothesis on the influence of L1s by taking Esperanto, an artificial language, which, despite not being anyone's L1, is nonetheless diffused. It is shown that the different L1s have a significant impact on productions in this exolingual communication language, proving to be sources of variation. It is interesting to note that only the Russian speakers make use of prefixes to give a perfective sense to stative or durative verbs, whereas Italian speakers are the ones who rely most on inflectional morphology to convey aspect . Moreover, could it not be said that certain TLs are, in fact, more likely than others to favour the early emergence of the process of morphologization ? This is indeed what seems to stand out in the works of Pavia (Giacalone Ramat 1990) : with Italian as the TL, the learners (even non-tutored) are capable of identifying more rapidly (in comparison with French, for example) morphological forms since Italian verb morphology is so transparent. Moreover, Italian allows us to observe more clearly certain stages such as the choosing of a base form for verbs before morphologization (i.e. in French L2 : V-[e] ; whereas in Italian it is based on the pattern of the infinitive : V-re ; cf. Berretta 1990), and to see more clearly the coming into place of the first oppositions V-re / V- (v) / V-to (cf. Infinitivo / Presente / Participio passato). Italian also offers the advantage of being a language which is both temporal and aspectual, thus adding to the debate on the pre-eminence of tense or aspect in the early stages of morphological development by presenting a host of different options.

The Imparfait in particular has been the focus of many detailed studies which help us to grasp what exactly the 'progressive and gradual' acquisition of morphological devices entails and also to understand that this slow process cannot be explained in terms of performance phenomena. The relatively late arrival of the Imperfetto in comparison to the Passato Prossimo is found in the acquisition of Italian (cf. Bernini 1990). In the case of French, for example, we can offer a formal explanation for this delay, i.e. the ambiguous nature of the spoken form V-[e], which may be applied to half a dozen different TAM categories (problems to do with identification of the form). In Italian, however, given that the equivalent marker is clearly identifiable, Bernini suggests a different explanation related to function : it is, then, the diverse nature of the functions (i.e. aspectual, temporal and modal)

of the Imperfetto which creates difficulties for the learner of Italian. For the learner of French, though, both the identification of the morphological paradigm and the linkage between form and functions offer resistance, and the delayed acquisition of the Imparfait in French can be explained by the combination of these two difficulties.

And, finally, in which contexts and for what purposes are morphological markers used ? To study morphologization without taking into account the discursive level - i.e. to stick to sentence analysis (whether 'necessary' contexts are marked or not) - would be to miss the point. Indeed the acquisition of morphology does not simply amount to acquiring sets of rules, but rather involves a slow development comprising a gradual building up from certain privileged contexts (as has been seen in the cases of learners of different L1-L2 pairs) and initially limited inventories of lexemes. Hence the methodological choice to work on structured textual productions such as accounts of real or fictional events based on different supports (cf. Noyau 1998, forthcoming, for the method illustrated using the longitudinal studies of Brum, Garat, Paprocka & Villecco).

It is thus that Brum (1998) notes those contexts which favour the emergence of new TAM categories in French in the narrative productions of Brazilian learners over a period of three years. The emergence of the Imparfait (which is very late in comparison with the *Passé Composé*) can be seen as a progression from restricted use in auxiliary verbs ([*ave*], [*ete*]) to the inclusion of modal verbs ([*puve*], [*vule*]), use in background clauses and, a lot later on, a gradual spread to include all other French verbs. And this despite the fact that Brazilian L1, a Romance language, has the possibility of expressing the imperfect / perfective past opposition, and also despite the fact that the learners are educated entirely in French at university. These results can be compared to studies on the influence of different event types (from the point of view of their inherent temporality) on the use of morphological markers - i.e. that which has been called (rather misleadingly) the "aspectual bias on morphologization" (cf. Andersen 1991). Andersen & Shirai (1994) put forward more balanced explanations of this apparent domination of aspect over tense as far as morphologization is concerned, a phenomenon which has kept linguists occupied for a number of years given the parallels drawn between L1 and L2 acquisition. First of all, if morphemes indicating perfective and imperfective aspect emerge respectively with verbal lexemes relating to opposing semantic classes, thereby not entering into opposition with each other at the start (the imperfective expressed with those verbs which indicate stative-durative situations ('1 state' verbs, cf. Klein 1994), and the perfective expressed with those verbs which indicate transitional, or even telic events (2 states, *ibid.*)), it is rather a case of the effect of the distributional bias in the input. However, this is also linked to the 'discursive motivation' which means that events involving two states constitute typically the narrative foreground and single-state events background situations (figure-foreground relations). This explains why in learners' accounts in different L2s, the narrative foreground events are presented in the perfective past whereas the background events stay in a base form with no temporal marking.

The new light shed on the matter by longitudinal studies based on targeted discursive activities of learners in a school-type environment or even in an isolated environment is, then, important. The structure of the development of temporo-aspectual morphology is very similar in tutored and non-tutored acquisition situations, despite the concentration on the handling of verbal forms in the school-type setting. This latter activity facilitates the recognition of forms by the learner – and also, therefore, his/her cross-relating with the corresponding TAM category in the L1, for which the semantic functions are similar in the studies between Romance languages by Garat, Brum and Villecco. The construction of the system follows its own course, independent of the teaching programme, is tested in the various communication opportunities available to the learner, and can be observed in complex speech activities. The

tempo of development and the 'visible' results of this development diverge since tutored learners all advance beyond the stage of using one basic temporal opposition (i.e. past / non-past) which, nonetheless, constitutes a barrier for the majority of non-tutored learners. The same pattern of development for the *Imparfait* in French is found in narrative accounts by adolescent Spanish-speaking (Villecco 1997) and Polish-speaking (Paprocka 2000) learners of French in an institutional context.

Finally, the slow-moving nature of the acquisition of temporal morphology can be explained by an interpretation of the problem in terms of a competition model (cf. Bates & MacWhinney 1989). The competition is between hypotheses bearing on different levels of language functioning, as developed in Noyau (1998). This model proposes a unified theory on the strategies of pragmatic, semantic and grammatical processing of utterance comprehension and production. Information stemming from different linguistic levels (morphology, lexical relations, word order, preceding co-text) is processed simultaneously. Links between form and function are unclear, probabilistic or unequally weighted. For these authors (i.e. Bates & MacWhinney), a person's individual grammar is said to be made up, then, of clusters of surface categories containing coalitions of meanings and intentions (cf. Kail 1991 for a comprehensive presentation of this model). The notion of redundancy is inherent to grammar according to this view. This helps to assure the smooth functioning of language, given the limited number of cognitive resources which can be allocated to the linguistic processing (acoustic, articulatory, perceptual, memory based). Different languages can display the same form-function configurations but give them different weighting.

Let us take two examples of the acquisition of temporality which can be explained using this model : 1) morphological markers of past tense (in French : Aux -V-e ; in Swedish v-te/de) ; 2) the anaphoric marking of the 'AFTER relation' between successive utterances in a single account. The difficulty in arguing in terms of competition with regard to temporality is that there is an interaction between diversified optional means (lexical indications of temporal relations, for example) and structural means, and not just between different structural means. This approach, however, helps us to explain certain aspects of the developmental path.

A. Morphological past tense markers in narrative accounts (by the use of **Aux-V-e** in French, **V-de/te** in Swedish, etc.)

We may consider these forms as permitting a coalition of functions :

- semantic function : anterior to TU
- lexical function : transitional event
- discursive function : foreground clause markers,

This can explain the successive or competing hypotheses of learners.

If we take the contexts of use of the narrative Present, we can say that only the second and third functions are realised. Generally speaking, it should not be found where there is conflict between functions, i.e. neither if the event is stative and non-transformational, nor in the background. This is normally the case in the L1²

There are cases in which these three functions enter into conflict :

- 1- when a past event figures in the background (semantic function > < discursive function).
- 2- When a stative-durative situation is made of a foreground event (lexical + semantic functions > < discursive function).

How, then, are these conflicts resolved so as to limit ambiguities? With regard to the first case of conflict, whenever the past remains unmarked in the background clauses in a given learner variety (cf. findings in Brum de Paula, Villecco and Carol), this is due to the fact that for this type of discourse (i.e. narrative) the discursive structuring is considered to be the most important factor. The form-function linkage which involves mapping the form Aux-V-e onto the function of temporal location is at this stage limited to the discursive context : the relating of an event. The development consists, then, in associating this configuration with new discursive contexts (progressive generalization).

If, however, the past is marked in the background (as is the case in the accounts by native French speakers), it is because this marking is considered necessary whatever the discourse structure : semantic marking gains the upper hand.³ With regard to the second case of conflict (i.e. when a stative situation is made of a foreground event), it has been noted that native speakers avoid the narrative Present. For learners this constitutes a critical context in which they are likely to attempt to use a temporally marked form. A productive way of examining the acquisition data is to find which contexts prove to be critical (and how), and which contexts trigger restructuring. Conflicts in the configuration *coalition of forms* < > *coalition of functions* show the relative weight of various simple form-function mappings in a learner variety at a given point of acquisition.

B. The relation of anaphoric consecutiveness between two clauses in a narrative

A coalition of forms is linked to this function :

- marking with a connector like *après* ('after') : a lexical device ;
- the 'natural order' principle, which is a constraint on referential movement in the foreground: a tactical or topological device, in the sense of Kail (1990). Here, however, the lexical marking is optional, and not subject to an obligatory rule. Therefore the functions can be differentiated and the law of least effort applied (i.e. using the tactical device only), in cases where coalitions of functions come into play. This is the case, for example, when there is contiguity between clauses which correspond to the referential constraint of the foreground.

Elements of this configuration come into conflict in the following instances:

- when there is a backward move for a clause which, from the point of view of other referential elements, would be part of the foreground (answering the *Quaestio* : "what *happened* (event) for P (person, actor) at Tn (definite temporal interval)?" (cf. Stutterheim & Klein, 1989) ;
- when there are referential breaks, notably in jumps in time from one group of linked events (forming an episode) to another, or when the event concerns actors who are different from the participants in previous events (in this case the relation could also be one of simultaneity, since several characters can either act at the same time or independently).
In a sequence $Evt_1 < Evt_2 < Evt_3 < Evt_n$ (events linked by an 'AFTER relation' of consecutiveness), we do effectively often find the following distribution in early narrative production :
- the 'AFTER relation' is not explicitly marked : between events expressed in a juxtaposed sequence, the relation Evt_i AFTER Evt_{i+1} follows from the discourse principle of natural order ;

- the 'AFTER relation' is marked by a 'consecutiveness connector' in contexts such as the following :

a) where the inherent temporal characteristics of the events do not allow an automatic interpretation in terms of succession ;

b) in the transition from one episode to the next, when there are leaps in time or, more generally, referential breaks.

Furthermore, the conception of grammar in terms of coalitions of forms mapped onto coalitions of functions, in the light of cognitive constraints on processing (cf. Slobin 1985), permits a better explanation of why a given linguistic regularity is progressively acquired :

- The learner first grasps one of the many possible simple form-function mappings contained in the coalition and internalises it : he/she applies it in specific areas which are not of course delimited in the same way as for the L1 given that this relation does not, in his/her variety, occur in the same formal and functional coalitions.
- Depending on the L1, one or other of the functions (or one of the forms) in a coalition may be a better candidate for selection by the learner than others.
- The conflict that arises in discourse within a specific coalition invalidates a given elementary form-function mapping, and forces the learner to reconsider the validity of that simple relation and to look for other forms for the given function (or other functions for the given form) building thus a coalition which is closer to the configurations of the L2.

The final stages of temporo-aspectual grammaticalization

We have moved on, then, from looking at studies of the acquisition of TAM categories by adult learners to works concerned with the values attributed to TAM categories by advanced learners (cf. Bartning 1997). Kihlstedt (1998), for example, is concerned with the continuation of the process of grammaticalization even though, from an initial glance, the learners in question (Swedish-speaking learners of French in a university context) appear to have acquired the temporo-aspectual categories of French. Morphological forms expressing the past are acquired and are present in their utterances. But how do they function ? And is their functioning the same as that of native speakers ? In other words, what is there left for them to learn ? And if indeed it is a case of 'not having anything left to learn', is it still possible to identify stages in the development of these 'advanced' learners ? Kihlstedt looks for 'weak areas' in the temporal system, in which slight instabilities or deficiencies can be spotted, and examines the extent to which these sensitive areas reveal a progression in the handling of the L2 between different stages in the recordings of the same speaker or between different more or less advanced speakers. The Imparfait proves to be an area of resistance as far as the acquisition of the temporal system in French is concerned (i.e. a delay in comparison with the Passé Composé, as has already been demonstrated). However, what is interesting to consider, in the case of advanced learners, is whether or not the handling of the correct **form** of the Imparfait is accompanied by that of the correct **functions**.

A quantitative approach to the verbal forms used to express past values shows that the overall split between present and past forms is linked to the level of acquisition : in general, native speakers use more past forms than do learners. Similarly, we see that the distribution of morphological forms between different semantic classes of verbs enables distinctions to be made between different levels of acquisition : learners do not freely combine TAM categories

and predicates from different semantic classes and the Imparfait is at first restricted to *avoir* (= verb 'to have') *être* (= verb 'to be'), then opened out to include stative verbs in the case of very advanced learners, whereas the Passé Composé is far more widely used across lexical classes of verbs. In comparison with Andersen's hypothesis on the primacy of the *Aktionsart* in the appropriation of temporo-aspectual verbal forms, Kihlstedt's results show the following :

- The Passé composé is not constrained to telic situations, but rather combines itself with all dynamic situations. It is only rarely used with stative situations. This distribution is only to be found in the productions of native speakers and the most advanced learner. For all speakers, the Imparfait is used above all with stative situations. However, it is also found in connection with dynamic situations for certain familiar verbs which have already been attested in the Passé Composé, and, in the case of the most advanced learner as well as native speakers, with all dynamic situations, including telic ones, allowing them to be placed in the background as secondary concomitant events. These final stages in the acquisition of the temporal system are what Kihlstedt calls the 'upper limits', i.e. associations which appear to run counter to the 'normal' link-up between morphological category and semantic cues, in which we see the Passé Composé with stative situations and the Imparfait with telic situations.

In order to understand better the functions of these TAM categories, and in particular the Imparfait, the contextual values of the Imparfait are defined by the different cases of linking TSit to TRef (TT above) : overlapping, partial inclusion (or reiterated at different intervals (habitual or irregular) or total inclusion. Following the close examination of the contexts of use and the values of the Imparfait, Kihlstedt observes, in decreasing order of frequency, the following in the production of the learners :

- a) Imparfait TT past = TSit (with stative situations). The most frequent construction used by learners :
e.g. *avant je voulais travailler avec le français maintenant je trouve que ça marche pas très bien*
'Before, I wanted to work with French. Now I find it doesn't work very well'
- b) 'Characterising' Imparfait : TT = TSit, with TSit as a long period in the past characterized by a dynamic situation (although not taking up all of the time interval) :
e.g. *mes parents ils sont commerçants et auparavant ils travaillaient dans la métallurgie*
'my parents are shopkeepers and before (that) they worked in the metallurgical industry'
- c) Imparfait where TSit constitutes discontinuous fragments of a broad TT : Imparfait is used to express repeated or habitual actions in the past ('used to'). This is more difficult for learners, and is found less frequently and only among the more advanced :
e.g. *quand j'étais à Rouen, je me promenais, on allait faire des tours en voiture sur la côte*
'when I was in Rouen I used to go for walks, we used to go for drives along the coast'
- d) Imparfait with a very short TT within TSit = "Imparfait progressif" : cf. durative situation placed in the TT of a punctual event :
e.g. *on s'est fait remettre en place parce qu'on ne marchait pas du bon côté*
'we were told off because we weren't walking on the right side'

The last two cases (c & d) are considered to be 'difficult' since the speaker has to link together several different time intervals.

- e) 'Upper limits' Imparfait (with momentary situations or events which are hard to imagine in terms of the 'duration' and without bounding) : we see a paradoxical value of the event which is close to realization but held in suspension. This latter case is not found in the productions of learners :

e.g. *quelques jours après il était élu à l'Académie Française*
'a few days later he was elected to the French Academy'

An explanation for this is that Swedish L1 does not mark the final boundary of the situation (neither in the Preterite nor in the Perfect). This value of the Imparfait has not yet been discovered by the learners who are not accustomed to handling this feature.

This gives an implicational scale of the acquisition of the values of the Imparfait, which allows us to assess the state of completion of the acquisition of temporo-aspectual morphology. The variety of values which can be attributed to the Imparfait at advanced levels can be studied according to the different TT-TSIt relations ; we find the presence of rare and infrequent combinations of tense and *Aktionsart* in the 'upper limits' of the system only in the productions of native speakers and very advanced learners.

Final remarks

As the learner varieties encountered in the early stages of language acquisition have shown, linguistic systems can function effectively without grammaticalized temporo-aspectuality. To broaden our reflections on the communicative limits of those learner varieties which do not express temporo-aspectuality grammatically, it would be interesting to look in more detail at the discourse cohesion and specification of temporal relations in those languages which do not possess grammatically marked temporo-aspectuality. Globally speaking, linguistic development in the domain of temporal reference can be characterized, as is the case in other areas studied in parallel (cf. Klein & Perdue 1992 for utterance information organization), by modifications of the relative weight of different principles of structuring time in discourse: pragmatic, semantic, phrasal or grammatical structuring (cf. Noyau 1998). It is in the most advanced stages of the acquisition of a linguistic system that slight but persistent differences surface, which allow us to detect a slight air of strangeness in what otherwise amounts to the accomplished handling of the foreign language.

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¹ In the sense of Klein, i.e. states, events, processes or actions.

² This reasoning is valid for deictically anchored personal accounts since in fictional accounts (stories, picture retelling ...) the semantic function of temporal location is annulled. In the case of the latter type of text, we can find examples in which the temporal morphology is completely neutralized by the continual use of the Présent, a tense which is both temporally and aspectually neutral.

³ In the case of Paprocka's Polish learners (1996, 2000), the lexical function (linked to *Aktionsart*) comes out on top in the choosing of ways of expressing the past and not the discursive structure opposing foreground and background. This can be linked to the overwhelming weight of this function in the temporo-aspectual system of Polish.