

## 3 The acquisition of temporality

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### 3.1 Introduction

Three reasons render the expression of temporality a particularly interesting issue in language acquisition research. Firstly, temporality is a fundamental category of human experience and cognition, and all human languages have developed a wide range of devices to express it. These devices are similar, but not identical, across languages, and this well-defined, or at least well-definable, variability presents the learner with a clear set of acquisitional problems, and allows the researcher to study in which order, and in which way, these problems are approached. Secondly, the expression of temporality in a particular language typically involves the interplay of several means - lexical (e.g., inherent verb meaning), morphological (e.g., tense marking), syntactic (e.g., position of temporal adverbs), pragmatic (e.g., rules of discourse organisation). This allows the researcher to study how an interacting system, rather than some isolated phenomenon, is acquired. Thirdly, one major category of temporality, tense, is closely linked to the finiteness of the verb, and finiteness in turn is of primordial importance in the development of utterance structure (if the language has finite verbs, as is the case in all languages studied in this project). Hence, the acquisition of tense is tightly linked to the acquisition of syntax.

In accordance with the tenets of the entire project, the investigation of temporality had three objectives. It asked:

- (a) How do learners express temporality at a given stage of their

<sup>1</sup>This chapter is based on the joint work of a number of researchers brought together in Final Report V to the ESF (Bhardwaj *et al.* 1988). The empirical analysis was done by the following people: Mangat Bhardwaj (Punjabi learners of English), Rainer Dietrich (German), Wolfgang Klein (Dutch, Italian learners of English), Colette Noyau (French and Swedish); in addition, there came important contributions from Beatriz Dorriots (Swedish), Korrie van Helvert and Henriëtte Hendriks (Dutch) and Daniel Véronique (Moroccan learners of French). The conclusions are based on discussions between Rainer Dietrich, Wolfgang Klein and Colette Noyau.

- acquisitional process?
- (b) How do learners proceed from one stage to the next?
  - (c) Which causal factors determine the form and function of the learner system at a given time, on the one hand, and its gradual transformation towards the target language, on the other?

These three objectives reflect a general assumption about the nature of language acquisition - the assumption that this process is characterised by a two-fold systematicity (cf. Volume I:1). At each point, the learner's language is not just a random accumulation of individual forms but a *system* in its own right - a learner variety which is governed by a number of distinct organisational principles. This is the first systematicity. The acquisitional process is a sequence of learner varieties, which in turn follows certain regularities. This is the second systematicity. What these two types of systematicity concretely look like depends on a number of causal factors - general cognitive principles, nature of source language and of target language, individual and social learning conditions, and others.

The chapter is organised as follows: In the next section, we shall outline the frame of analysis; section 3 describes informants and data (it also includes some representative passages from the various learner varieties); sections 4 and 5 contain the results. It is impossible to give detailed reports of the development of all twenty learners studied here. Still, we felt it useful to present the developmental course of two selected learners, Lavinia and Abdelmalek, in some detail, in order to give the reader a concrete impression of how the individual learner tackles the various problems. In section 5, the findings of our analysis of all twenty main informants are generalised and related to the three key questions mentioned above.

## 3.2 Frame of analysis

### *The inflexional paradigm bias*

There are many ways in which temporality is encoded in natural language, in particular

- the grammatical categories of tense and aspect;
- temporal adverbials of various types;
- special particles, such as the Chinese perfectivity marker *le*;
- inherent temporal features of the verb (and its complements);
- complex verb clusters, such as *to begin to sleep*, etc.

Studies on the acquisition of temporality, both in first and second language, typically concentrate on the morphological marking of tense and aspect, such as the acquisition of the *ing*-form in English or of Polish verb inflexion (see, for example the survey articles in Fletcher and Garman 1986 and, for second language acquisition, Schumann 1987). We think that this 'inflexional paradigm bias', whilst in accordance with traditional research on temporality in general linguistics, yields an incomplete and potentially misleading picture of the developmental process. Firstly, tense and aspect marking are highly language-specific devices; but for cross-linguistic purposes, we need language-neutral characterisations of what is expressed by these and other means. Secondly, focusing on tense and aspect marking ignores the interplay of verb inflexion with other ways of expressing temporality, notably adverbials, whereas an essential part of the developmental process is the changing interaction between the various ways of expressing temporality. Thirdly, the functioning of temporality is always based on a subtle balance of what is explicitly expressed and what is left to contextual information; again, a substantial part of the developmental process is the permanent reorganisation of this balance.

The point of this entire argument can perhaps be made clearer by a look at early - or at late but fossilised - learner varieties. Typically, they lack any verb inflexion, hence morphological marking of tense and aspect. Nevertheless, their speakers manage to tell quite complex personal narratives, with a dense web of temporal relations (cf. Klein 1979, 1981; Dittmar and Thielecke 1979; von Stutterheim 1986). The mere analysis of growing verb morphology will therefore miss important aspects of the learner's capacity to express temporality. Hence, we need a somewhat broader approach, whose basic lines will now be sketched.

*Linguistic meaning proper and contextual information*

A speaker who, on some occasion, utters a sentence such as

(1) *He swallowed the frog.*

expresses a certain content which results from the lexical meaning of the individual words (or morphemes), on the one hand, and the way in which they are put together, on the other. The hearer may then combine this *linguistic meaning* proper with other information available to him or her, e.g. from previous utterances, from situational perception, or from general world knowledge, that is, the hearer integrates linguistic meaning and *contextual information*. It is useful

to distinguish two ways in which contextual information is called on to complete the utterance, above and beyond what is made explicit by linguistic means. Firstly, there is contextual information which is systematically used to fill certain well-defined 'open slots' in the lexical meaning of expressions, notably deictic and anaphoric terms. In these cases, we shall speak of *structure-based context dependency*. In temporality, the most salient example is tense which is generally assumed to link some event or state - in brief, a situation - to the time of utterance (TU), and only contextual information allows us to determine what TU is in the concrete case. Other examples are temporal adverbials, such as *now*, *two weeks ago*, *then*, *some time later* and many others. Secondly, the listener may also add, with varying degrees of certainty, other features to what is actually expressed by (1), for example that *he* is now less hungry than before. This inference is not directly linked to structural means, such as tense marking or anaphoric pronouns, but more globally related to the linguistic meaning. Therefore, *inference* or *global contextual dependency* in this sense is less accessible to systematic linguistic analysis than structure-based context-dependency. But it is no less important for the functioning of temporality, especially when, as is the case in learner varieties, the linguistic repertoire at hand is quite limited. Global context dependency is at the very heart of the discourse principles to be discussed below.

#### *Situation, lexical content, and time structure*

An utterance such as (1) expresses, by virtue of its linguistic meaning,

- some situation, the swallowing of some frog by some male entity;
- the fact that this situation occurred at some time before the time of utterance.

Therefore, it is useful to distinguish two components within the linguistic meaning. One part, roughly identical to the non-finite part 'he swallow the frog', is a partial description of the situation, and a second part relates this descriptive component to a particular time span (or a set of time spans), which belongs to some temporal structure. Since the descriptive component stems basically from the lexical content of the verb and its arguments, we shall call this part 'lexical content' and refer it by pointed brackets, e.g. <he swallow the frog>. The three utterances

- (2) *H e will swallow the frog.*
- (3) *H e was swallowing the frog.*
- (4) *H e has swallowed the frog.*

have the same lexical content as (1), but they are related to time structure in a different way.

There is a difference between a *situation*, which is valid at some time, and the *lexical content* which partly describes this situation. A lexical content is a complex set of semantic features which stem from the lexicon. Some of these features are temporal, and this allows various types of lexical contents to be classified. Thus, <John be ill> involves one state, whereas <John become ill> involves two states (roughly 'not be ill, then be ill'). Numerous such classifications have been proposed under different labels such as 'Aktionsart, verb type, verbal character, lexical aspect', and others. After some initial piloting, we found it helpful to use the following four *inherent temporal features*:

± B(oundary), i.e., does the lexical content specify boundaries or not? There may be a left boundary (LB) and a right boundary (RB). The latter is particularly important for discourse organisation.

± CH(ange), i.e., does the lexical content involve an internal temporal differentiation? It may specify, for example, the beginning, middle or end phase of a situation, or it may specify that some assignment of properties (qualitative, spatial) changes over time.

± D(istinct) S(tate), i.e., does the lexical content involve a 'yes-no-transition'? Obviously, + DS presupposes + CH, but not vice versa. The difference is illustrated by contrasts such as between *to rot* and *to become rotten*, where the former does not imply that something *is* rotten at the end (transition from not rotten to rotten) but only that it is *more* rotten than before.

± E(xtension), i.e., does the lexical content say that the situation has an extended or a 'punctual' duration? Apparently, - E presupposes boundaries, and one way to define - E is to say that in this case, both boundaries collapse.

Utterances like (1)-(4) link a lexical content to some time span, which is part of a *time structure*. Opinions vary somewhat on how this structure is to be defined. We shall make the following *minimal* assumptions:

1. The elements of the temporal structure are time spans (labelled here  $t_1$ ,  $t_2$ , etc), not time points.

2. There are two types of relations between time spans:
  - a) order relations, such as 't<sub>i</sub> BEFORE t<sub>j</sub>', 't<sub>i</sub> AFTER t<sub>j</sub>', etc.,
  - b) topological relations, such as 't<sub>i</sub> fully included in t<sub>j</sub>', 't<sub>i</sub> overlapping t<sub>j</sub>', 't<sub>i</sub> simultaneous to t<sub>j</sub>', etc.;
3. There must be a distinctive time span, the time of utterance TU.

It is this time structure which allows us to define *temporal relations*, hence to locate some situation in relation to some other situation. It allows the speaker, for example, to say that the time of some situation precedes the time of speaking. We shall call the time of the situation to be situated, the THEME, and the time in relation to which it is situated, the RELATUM. In (1), the time of his swallowing the frog is the theme, and the time of utterance is the relatum. In this case, the relatum is deictically given. There may also be anaphoric relata (for example the time of some event just talked about, as in *two weeks later*), or calendaric relata (as in *in 1992*, i.e., 1992 years after the birth of Jesus Christ). All of these relata play an important role in learner languages.

Many temporal relations are imaginable between theme and relatum, such as 'shortly before, long before, partly before and partly in' etc.; but for present purposes, it is sufficient to distinguish the following relations:

- Theme (properly) BEFORE relatum;
- Theme (properly) AFTER relatum;
- Theme (properly) IN relatum;
- Relatum (properly) IN theme and
- Theme CON relatum, i.e., more or less at the same time.

Temporal relations are expressed by tense, aspect, temporal adverbials, and they show up in principles of discourse organisation.

### *Tense and aspect*

Conventional wisdom says that tense serves to situate the 'event', or situation in general, in relation to TU, whereas aspect serves to give a particular perspective on the situation - the situation is presented as completed or not, from the outside or the inside, with or without reference to its inner constituency. The first assumption is clearly false. We would normally not assume that in *The lion was dead* the lion's being dead precedes the time of utterance, it rather includes it. Similarly, the utterance *The door was open* need not be false if the door is still open, hence, its TU is included in the time of the door's

being open. The problem with aspect being defined as a particular 'perspective' on the situation lies in the fact that notions such as 'seen as', 'presented as' are rather metaphorical and hard to define in a way which would allow the linguist to apply them in empirical work. What does it mean to say, that in *John was sleeping*, the situation is shown in its inner constituency, and in *John slept*, without reference to this inner constituency? Therefore, we use an approach under which 'situating in relation to TU' and 'presenting under a particular perspective' come out as consequences, whereas the definition of the categories is strictly in terms of temporal relations.

In an utterance like:

(5) *Yesterday at ten, John had left London.*

two quite different time spans are involved. First, there is *the time of the situation*, in brief TSit, here the time at which John left London. And second, there is the time for which it is claimed that at this time, John is in the poststate of leaving London. We shall call this latter time, 'yesterday at ten', the *topic time*, in brief TT. This distinction between TSit and TT allows us a simple definition of tense and aspect. *Tense* is a temporal relation between TT and TU, *aspect* is a temporal relation between TSit and TT. For present purposes the following tenses and aspects are distinguished:

### Tenses

PAST	TT BEFORE TU
PRESENT	TU IN TT
FUTURE	TT AFTER TU

### Aspects

PERFECT	TT AFTER TSit
IMPERFECTIVE	TT IN TSit
PERFECTIVE	TT includes end of TSit and beginning of time AFTER TSit
PROSPECTIVE	TT BEFORE TSit

Tenses and aspects, as defined here, are abstract relations. Languages may encode them in various ways. It may be that a language collapses all tenses in one morphological form, hence has no overt tense marking (in morphology), similarly for aspect. English, on the contrary, has a very clear and transparent system. Basically, past tense morphology encodes PAST, present tense morphology encodes PRESENT, and future tense morphology encodes FUTURE. The simple form encodes PERFECTIVE, the *ing* -form IMPERFECTIVE, the perfect en-

codes PERFECT, and the *be going to-* construction encodes PROSPECTIVE. Compare, for example, the following three utterances:

- 6) *The stork had swallowed the frog.*
- 7) *The stork was swallowing the frog.*
- 8) *The stork swallowed the frog.*

Tense morphology indicates in all three cases that TT - the time for which something is claimed - precedes TU. It leaves entirely open whether TSit is in the past, too. Aspect marking says in (6) that TSit precedes TT, hence the swallowing is over at that time in the past and, consequently, at TU as well. In (7), TT is properly included in TSit. This gives us the impression that at TT, the stork is just 'fully in the action', and it is open whether this action is over at TU. In (8), TT includes not only part of the action, but also part of the time after TSit, and since TT itself is in the past, the action must be over at TU. But this is not expressed by tense morphology alone but by a combination of past tense and perfective aspect.

#### *Temporal adverbials*

Not all languages have grammaticalised devices to express tense and aspect. But all languages use a rich variety of temporal adverbials, and therefore, they are in a way more basic to the expression of temporality. This is also reflected in the pre-eminent role which they play in learner varieties. There are three types which appear very early and are steadily elaborated. A fourth type comes in at a much later stage but is then regularly used. These types are:

- TAP: They specify the relative Position of a time span on the time axis: *now, then, yesterday at six, two weeks ago, on June 1st, 1992;*
- TAD: They specify the Duration (or, not exactly the same, but a related possibility, the boundaries) of a time span: *for many days, all week, from three to five;*
- TAQ: They specify the frequency of time spans: *twice, quite often;*
- TAC: This class is less clearly defined, but normally they serve to mark a particular Contrast: It is that particular time span, and not a different one which could have played a role. Typical examples are *already, yet, only* (in temporal function).

Among those four classes, the first is clearly the most important for learner varieties. In the initial stages, temporal relations of all sorts are exclusively expressed by TAP in combination with discourse principles, to which we will turn now.

*Discourse organisation*

In a coherent text, the whole information to be expressed is distributed over a series of utterances, rather than being projected into one utterance. This distribution is not done at random but is governed by several principles which impose a certain structure on the text. In particular, they constrain the way in which information is introduced and maintained. This 'referential movement' (Klein and von Stutterheim 1987, 1992) concerns several semantic domains, not just persons for which it has mainly been studied (Givón 1983) but also, for example, time and space. Thus, an utterance is usually temporally linked to the preceding and the following ones. The way in which this is done depends on the type of discourse. A narrative normally has a different temporal discourse structure from route directions or an argument. We shall briefly discuss this for the main discourse type studied here - personal narratives, i.e., oral accounts of incidents that really happened to the speaker.

A narrative in this sense consists of a *main structure* (narrative skeleton, plot line, foreground) and a number of *side structures* (background material), such as evaluations, comments, utterances which set the stage, etc. The main structure can be characterised by two conditions which constrain the referential movement, especially with respect to temporality, and which define the topic-focus-structure of each utterance. They can be stated as follows (see Klein and von Stutterheim 1992):

*Main structure of a narrative*

Focus condition: Each utterance specifies a singular event whose time TSit falls into the topic time of that utterance. The event specification, normally by the verb, constitutes the focus of the utterance.

Topic condition: The topic time of the first utterance is either introduced by a TAP or follows from situational context. The TT of all subsequent utterances is AFTER. All TTs precede TU.

The first condition entails, among others, that utterances of the main structure must have PERFECTIVE aspect, and that the lexical content which describes the situation must have the internal features + B, +DS. The second condition entails that the TT of all utterances form an anaphorical chain. This condition has been stated in the literature (Clark 1971, Labov 1972) under various labels. We shall sometimes call it the *Principle of natural order* (PNO): 'Unless mentioned other-

wise, order of mention corresponds to order of events'.

Both conditions can be violated. Such violations lead to side structures of different types. For instance, an utterance may serve to specify a time span, rather than have it given by the topic condition. Typical examples are 'background clauses' such as *We were quietly sitting in the kitchen*. Very often, subordinate clauses serve exactly this function, and this is the reason why they belong to the background. Other utterances do not specify an event, as required by the focus condition; typical examples are comments, evaluations and descriptions which interrupt the narrative thread.

We shall see later that these conditions are crucial to an understanding of how the expression of temporality functions in learner varieties.

#### *Empirical base: Data and informants*

Among the various types of data collected in the ESF project (see Volume I:6), personal narratives - which are typically embedded in conversations - seem to offer the richest temporal structure. Since narratives normally do not deal with the future, it was further decided to complete the data by those conversational passages where informants speak about their future plans. In the course of the study, it turned out that this restriction to two text types is occasionally too strong, because it does not provide enough material for some informants, especially in the beginning phases. Therefore, narratives and future plans were completed by additional material wherever necessary. This material included (a) other passages from conversations, in particular passages in which informants speak about events in the past without constructing a coherent story, and (b) film retellings. The latter are not embedded in the past in the same way as personal narratives are, but otherwise, they exhibit a similar temporal organisation (but see Dietrich 1992, chapter 7.1). Minimally, two informants per SL/TL pair over a period of three cycles were analysed in detail, with data from other informants being included where necessary (see Volume I:3.1).

The main informants are Madan, Ravinder, Santo, Lavinia, Tino, Casco, Abdullah, Ayshe, Ergün, Mahmut, Fatima, Mohamed, Abdelmalek, Zahra, Berta, Alfonso, Fernando, Nora, Rauni and Mari, who are described in Appendix B of Volume I.

Initially, only one encounter per cycle was analysed for each informant. For some informants, this proved to be enough, since there was no salient development. In most cases, however, these analyses

were then systematically completed by data from the encounters in between, up to the point at which no further variation in the expression of time was noted. We think that proceeding this way is perfectly appropriate to the phenomenon at hand. For each informant, several thousand utterances were available. But there is no point in analysing five thousand conversational or narrative utterances in which nothing changes (with respect to the expression of time). However, this procedure makes it somewhat difficult to give exact figures for the amount of data analysed. In no case, however, were less than 500 utterances per informant analysed.

*Text samples*

Lack of space precludes giving samples for each informant. We have selected six extracts which give, in a way, a representative picture of what the learners' languages look like. The first two extracts stem from Madan, a Punjabi learner of English whose language shows considerable development. In both cases he is talking about how he came to England.

Text A, Madan, cycle 1.1 (after twenty months of stay)

*punjab + i do agriculture farm  
before i go + seventy five + in the arab country  
afghanistan ...  
afghanistan to turkey  
to antakia  
to syria  
to lebanon  
after there go syria  
yeah + jorda n g o india  
i work in the indian house*

Temporality is only made explicit by adverbials such as *before*, *after*, *seventy five* and *punjab*, where the latter is actually a local adverb; but here, it means something like 'when I was in the Punjab'. The relative order of events is only indicated by PNO.

Text B: Madan, cycle 3.6 (after forty-eight months of stay)

*twenty seventh jun e + right + seventy seven  
i go to the kabul + afghanistan  
from delh/ new delhi to kabulstan + right?  
kabulstan i stay + nearly five six month  
no work there  
i sitting in the hotel + right?*

*no money in my pocket  
after + i ask my brother  
my brother stay in india + new chandigar  
i ask my brother + my/  
"i want money  
i go every/anywhere"  
he said "how much you want?"  
i say "seven eight thousand pound + rupees"  
indians you know  
he give the money by post  
when i take money + i go to the turkey  
from kabul to turkey ... by air  
kabul i stay ++ i thinks one/one day one night/  
no sorry ... in turkey yeah  
after + i take/catch the coach from turkey to antakia*

Note that Madan's formal repertoire is still very far from the English standard. But his story is fluent and rich, and its temporal structure is comparatively transparent.

The following two texts were produced by Tino, an Italian learner of German.

Text C: Tino, cycle 1.9 (after fourteen months of stay)  
(Interviewer: And how did this happen with the accident?)

*soo + is passiert in eine diskothek  
'o.k., has happened in a disco'  
kenne sie die "extrablatt" ?  
'Do you know the "Extrablatt"' <name of disco>  
in extrablatt war ein freundin + micki + mein freund  
'in Extrablatt was a (girl) friend + Micki + my friend  
+ mit eine andere bekannt  
+ with other acquaintance'  
aber diese bekannt is ein wenige verruckt  
'But this acquaintance is a bit crazy'  
er nehme die freundin von micki mit seine hände  
'he take the girl friend of Micki with his hands  
+ so  
+ like that'*

wenn kommt micki + er nehme die haare die  
'when comes Micki + he take the hair the

freundin micki  
girl friend Micki'

und dann sie spreke schnell  
'And then, they speak fast'

sie sagen die schlecht wort auch  
'they say the bad word, too'

und dann sie machen streit  
'and then they make struggle'

und dann sie gehen aus diskothek  
'And then they leave disco'

sie machen nochmal die streit  
'They make again the struggle'

aber micki hat so eine \*ferro\* mit seine hände  
'But Micki has kind of \*ferro\* (iron) with his hands

in die gesicht die andere  
into the face the other'

die andere person hat zwei zähne wegge/ kaputt  
'The other person has two teeth away/ broken'

und dann diese person hat gesagt,  
'And then this person said,'

"ich gebe dir vier stunde oder ich schieße dich"  
"I give you four hours or I shoot you"

so drei uhr nacht ich gehn nach hause  
'About three o'clock night I go home'

micki kommt fünf minuten später  
'Micki comes five minutes later'

2

Text D: Tino, cycle 3.7 (after twenty-three months of stay).

gestern ich war böse mit mein chef  
'Yesterday + I was angry with my boss'

<sup>2</sup>Micki is shot twice but survives.

86 Adult language acquisition: results

*weil ich habe nicht mehr auf meine*  
'because I did no longer enter in my own

*kasse abonniert*  
cash register'

*wenn ein tisch komm + ich nehme die*  
'As soon as a table comes + I take (down) the  
*bestellung*  
order'

*und ich muß auf die kasse abonnieren + was sie*  
'and I must enter into the cash register, what they

*haben bestellt*  
have ordered'

*der hat gesehen*  
'He watched' <he=the boss>

*er war böse + weil ich habe nur die kollege*  
'He was angry + because I have only the colleague  
*geholfen*  
helped'

(Interviewer asks whether he had registered the orders by error in his colleague's cash register)

*nee + ich habe gesagt*  
'No, I have said'

*'ob ich abonner noch + ich muß vielleicht*  
'If I register still + I must perhaps

*elfuhr weggehen*  
leave at eleven'

*ich muß warten + daß die leute hat/ is fertig mit*  
'I must wait that people have/ is ready with'

*der essen*  
eating

*dann ist schon später'*  
'Then is perhaps later'

*dann er hat mir gesagt*  
'Then he has told me'

*"bis neun du muß abonnieren*  
'Till nine + you must register'

*dann du kanns weggehen*  
'Then you may leave'

*aber du hast so gemacht auch die andere male"*  
'But you did this also the other times''

*aber er war bißchen besoffen*  
'But he was bit drunk'

The following two extracts are from Mohamed, a Moroccan learner of Dutch.

Text E: Mohamed, cycle 1.1 (eight months after arrival)

The story was told in answer to the interviewer's question 'How did you learn to do carpentry?'.  
'

*buurman komt bij ons om/voor/om timmerman*  
'neighbour comes to us to/for/to carpenter'

*om ramen t e maakt*  
'for windows to makes'

*hij maakt bij uh vijftien/kwartier*  
'he makes with uh fifteen <minutes>/quarter'

*ik kijk*  
'I watch'

*kwartier ik zeg*  
'quarter I say'

*"ik probeer"*  
'"I try"'

*buurman van mijn oom hij kijkt mijn werk*  
'neighbour of my uncle he watches my work'

*hij zegt "moo i werk"*  
'he says "good job"'

[Interviewer: "and painting where did you learn that?"]

*die man ook buurman van mijn oom hij komt*  
'that man also neighbour of my uncle he comes

*vandaag*  
today' <one day>

88 *Adult language acquisition: results*

*oom verf deuren*  
'uncle paint doors'

*ramen verf*  
'windows paint'

*hij komt vandaag*  
'he comes today' <one day>

*ik help uh hem*  
'I help him'

*ik help him om negen uur tot elf uur*  
'I help him at nine o'clock till eleven o'clock'

Text F: Mohamed, cycle 3.4 (twenty-eight months after arrival)  
The story is about an evening he spent with friends:

*die zal ik vertellen*  
'that will I tell'

*wij wassen daar te laat*  
'we were there too late'

*hij was bij mij thuis*  
'he was with me at home'

*was + ik denk + vrijdag*  
'<it> was + I think + friday'

*toen was hal vier*  
'then was half four' <3:30>

*hij tegen mij "wij gaan centrum in tilburg"*  
'he to me "we go centre in Tilburg"'

*"dat is goed"*  
'"that is good"'

*toen wij daar*  
'then we there'

*ja zit die jongens allemaal bingo te spelen*  
'yeah sit those boys always bingo to play'

*wij hebben ook mee met hun gedaan <meegedaan=*  
'we have also with with them done' joined>

*ik krijg niks*  
'I get nothing'

*toen een keer gaat ie saïd hij bingo uh*  
'then one time goes-he Saïd he bingo'

*hij gaat bingo doen*  
'he goes bingo do'

*ja + maar saïd is me vriend*  
'well, now Saïd is my friend'

*ik heb die kartje*  
'I have this card'

*ja, was/moest vijf + een ligne horizontale*  
'yeah, was/must five + one ligne horizontale'

*er zit vijf ligne*  
'there sits five ligne'

*ik heb twee of + ik denk + twee*  
'I have two or + I think + two'

*toen ik heb rest ook volgemaakt*  
'then I have rest also completed'

*toen was nog zes*  
'then was still six'

*toen komt die zes*  
'then comes that six'

*tegen hem "bingo"*  
'to him "bingo"'

The story goes on for a long time; but this selection suffices to make the point. Although Mohamed is in many respects still far from the Standard, his expression of temporality is now almost perfect.

#### *Interpretive analysis*

A reasonable study of the way in which temporality is expressed and how this develops over time cannot be satisfied with counting the number of adverbials or the ratio 'simple form: *-ing* form'. Simply to assume, for example, that a learner of English who uses simple and *-ing* forms makes an aspectual distinction is to succumb to the closeness fallacy. The fact that many *-ing* forms are attested in a text does not say anything about the learner's ability to mark as-

pect. In order to decide on this ability, we must know what the speaker, here the learner, wants to *express* by this and other means. A mere form count and how it develops over time would perhaps look impressive, but in fact be completely uninformative (as we have already suggested in Volume I:5.3). We must also try to determine the meaning of the learner's utterances. Therefore, the analysis itself was done utterance by utterance and involved two parts. First, all linguistic devices relevant to the expression of time were recorded (e.g., adverbials, morphological variation, but also violations of PNO, etc). Then, we tried to interpret the intended temporal meaning of the utterance. As any interpretation, this process is cumbersome, and in a number of cases several possible interpretations had to be listed. But as analysis goes along, most of these ambiguities are slowly resolved, and the picture becomes increasingly clear and stable. We do not want to suggest that this procedure is foolproof. It may well be (and in this project, has occasionally indeed been) the case that other linguists, when interpreting the same data, would have come to different conclusions, at least in some respects. But we feel that this interpretive procedure is the only way to come to substantive conclusions about the expression of time in learner language.

### 3.3 The path of two learners

The short text samples above should have given some impression of what the learners' varieties look like. In the early stages, all learners construct a simple repertoire of linguistic devices whose characteristic traits are the following:

- (a) Utterances consist either of simple nouns, or a verb with some nominal complements; they can be complemented by adverbials in initial or final position (sometimes, especially in answer to a question, there are only adverbials);
- (b) Verbs show up in a single form, the *base form*. In English, this is usually the bare stem. In other languages, it may also be the infinitive or even a selected finite form;
- (c) There is no copula;
- (d) Adverbials are mostly of TAP-type, that is, they specify a position. They can be deictic (*now*), anaphoric (*before*) or 'absolute'

(*Sunday, Christmas*). There are also a small number TAD and TAQ at this early point.

We shall call this repertoire the *basic variety*. For some learners, this basic variety is more or less the final system, too. But most develop it in the direction of the target language. This development is relatively similar, but learners differ considerably in how far they get.

To illustrate this development, we shall now closely follow the progress of two learners: Lavinia and Abdelmalek.

*Lavinia, step by step*

Within the course of twenty-two months, Lavinia was recorded fifteen times at approximately equal intervals. We now go through these encounters and briefly describe how her temporal system develops:

*LAI.1 (six months after arrival)*

In the first encounter Lavinia's learner variety is essentially the basic variety. There are two deviations from it, though:

- (a) In about half of the cases, Lavinia marks the third person singular by *-s*, i.e., *h e like* and *h e likes* co-occur, often in two subsequent utterances. We can already note at this point that the rate of correct usages constantly increases although instances of the *s*-less form are found even in the last recording. The opposite mistake (*-s* for second or first person) does not occur at this point, although it occasionally shows up in later recordings;
- (b) She often uses the present tense copula, and if so, the correct forms are used.

Both features point to the fact that Lavinia is about to go beyond the basic variety.

*LAI.2 (seven months' stay)*

There are three past tense forms, all of them irregular: *said*, *went*, *was*. They are used to refer to events in the past, whereas the normal 'past form' is still  $V_0$  or - very rarely - *Ving*. Otherwise, her system is the same as before. (There are developments in other, non-temporal respects, which are not noted here.)

*LAI.3 (eight months' stay)*

The bulk of utterances still shows the basic variety (with the copula now being completely regular in the present tense). But there are two developments:

- (a) In four cases, she uses present perfect forms. Consider the following question-answer-sequence:

LA1.3 (1) TLS: *did you buy your furniture here?*

LA: *i have bought here*

TLS: *did you buy a tv set?*

LA: *n o + i want t o buy because has broken that one*

At least the first instance shows that she has no watertight functional contrast between 'simple past' and 'present perfect' at this point. (There is no increase in past forms.)

- (b) There is an isolated future tense form:

LA1.3 (2) TLS: *i s that all right?*

LA: *i shall see*

Finally, it should be noted that the *Wing* forms increase in number. But there is no hint that they mean anything different from the bare stem  $V_0$ .

LA1.4 (*nine months' stay*)

There is no noticeable change. We observe a number of present perfect forms (some irregular in form, like *I have find ; m y son has write*), as well as *-ing* forms; but the former are used like the simple past, and the latter like  $V_0$ . Still, the outer appearance of her language more and more resembles Standard English, as is illustrated by the following extract:

LA1.4 (1) TLS: *d o you make cakes?*

LA: *yeah + sometime + but now + m y oven isn't working very well + when i start + i don't know + is good + i put [the oven] on six or maximum + and after two minutes + it's on the minimum*

This impression is slightly misleading, however; the contracted negations, for example, are still rote forms, and whilst the continuous form is quite appropriate here, there are other examples which show that she does not really master it.

LA1.5 (eleven months' stay)

There is no categorial change, but a distinct quantitative change: TT in the past is now dominantly marked by simple past forms - but only for *irregular* verbs (including all forms of the copula and of the auxiliary *to have*). There is still no single *-ed* past. Consider the following extract:

LA1.5 (1) *when i was young + i had a job i n a shop + i spoke a bit Serbo-Croatian.*

Aspectual marking - simple perfect versus simple past or *-ing* versus simple form - has not developed.

LA1.6 (twelve months' stay)

The recording contains the first occurrence of a weak simple past:

LA1.6 (1) *she explained <it to> m e o n the phone*

While this is still an exception, the simple past of strong verbs is regularly used (there is only a single instance of  $V_0$  with past reference).

This is also the recording with the first use of the adverbial *again*. She also starts using some TAP which do not show up in the basic varieties of the other informants, for example *until june*.

LA1.7 (thirteen months' stay)

No observable change.

LA2.1

There are three noticeable developments:

- (a) There is an increased use of regular past, cf. (her son had been to a dentist):

LA2.1 (1) *they said "no" + the pain stopped + there was n o pain after this + but they said to me ...*

- (b) Her use of the aspectual forms approaches the Standard; this holds for the continuous form as well as for the simple past. Consider the following two examples:

LA2.1 (2) *monday + w e went t o the dentist for the last time + for some filling + and now < he > has stopped until September for a check-up.*

Clearly, one could not use the simple past in the last utterance.

LA2.1 (3) ... *woman who work/who has been working*

Here, she apparently corrects to the (contextually appropriate) continuous form of the present perfect.

(c) TT in the future is now often marked by *will* or *shall*.

This recording also contains a first occurrence of habitual *used to*:

LA2.1 (4) *you used to work*

LA2.2 (*sixteen months' stay*)

There are now a number of correct usages of the continuous form, such as

LA2.2 (1) *now i a m waiting for a n answer ... i a m waiting because he asked me for the/mine national insurance number + and <I> didn't have one.*

Note the correct *didn't*.

LA2.2 (2) *now + i a m going for the interview*

In addition, there is a first occurrence of the prospective:

LA2.2 (3) *w e are going to pay*

She has also worked on her repertoire of adverbials. The first *yet* shows up, and she has complex constructions like *any time now*.

LA2.3 (*seventeen months' stay*)

No major change, but the first *already* is used. There are now many forms of the prospective, still in the present (*is-going-to*).

LA2.4 (*twenty months' stay*)

The present perfect is now regularly used as an aspect, as in

LA2.4 (1) *the career officer has been there for thirty years*

In the context where this utterance occurs, neither the simple past nor the present could be used. This recording also gives evidence that she indeed uses the prospective as an aspect rather than as a tense variant of the simple future:

LA2.4 (2) *i was going to say i know people who doesn't speak/don't speak to me because i can't speak english*

Finally, there is a first clear pluperfect:

LA2.4 (3) *i don't know if i had understood the question very clearly*

All of this gives evidence that she is now close to mastering the English aspect system and its interaction with the tense system.

LA2.5 (*twenty-one months' stay*)

No noticeable change, but the first negated future is used:

LA2.5 (1) *but i fi don't pass the exam + i won't be able to work*

LA2.6 (*twenty-two months' stay*)

As a rule all aspect and tense forms are correctly used, including the continuous form in all tenses (except the future, but this is probably accidental). We say 'as a rule', because there are still some instances of backsliding to the basic variety.

LA3.1 (*twenty-eight months' stay*)

This last conversation, which was recorded about six months after LA2.7, shows close to perfect mastery of the English temporal system. This does not necessarily mean that her competence is indeed at the level of a native speaker: there are occasional errors, and it may well be that she misrepresents some aspects of the English system. But if this is the case, it does not become apparent from her production. Judging from what she says and how she interacts in English, she has reached the target - at least as regards the expression of temporality.

The data analysed here are limited in scope and type, and the interpretation of individual utterances is often problematic. Still, the general picture of Lavinia's development beyond the basic variety is very clear, and can be summed up in three points:

1. *Development is slow and gradual.* This applies both for adverbials and for morphological marking of tense and aspect. As a consequence, we often observe the co-occurrence of different forms, such as  $V_0$  and *Ving*,  $V_0$  and simple past, simple past and present perfect, without any noticeable difference in function. There is an important corollary of this fact: *Form often precedes function.* The informant may well have the *-ing* form, but apparently, it does not serve to mark any functional contrast, and certainly not the one which it has in the target language.

2. *Tense marking precedes aspect marking.* In the basic variety, all tenses and aspects are conflated in one form -  $V_0$ , with *Ving* as a (rare) variant. Then, this form is gradually differentiated. First, TT in the past is marked by simple past forms. The same function is also expressed by present perfect (although this is much less frequent). Next follows future marking. Only then are the already existing forms *have* + participle and *Ving* used to express perfect and imperfective aspect. At about the same time, the prospective aspect *be-going-to* V is acquired. The last form occurring in the data is the pluperfect, i.e., a combination of tense and aspect. (No future perfect is observed, but this may be accidental).
3. *In past tense marking, irregular forms precede regular forms,* i.e. the normal *-ed* marking of the simple past shows up after forms such as *bought, left, was, had,* etc. No overgeneralisations of regular forms are observed (although some false forms, such as *he has find* are attested).

#### *Abdelmalek, step by step*

The temporal system of Standard spoken French functions in many respects like the English system; it has the same types of adverbials, it uses the same pragmatic devices, such as PNO, and verb morphology (in a broad sense, i.e. inflexion and periphrastic constructions) mark both tense and aspect. Nevertheless, the acquisition of verb morphology is much more difficult, for two main reasons. First, tense and aspect are not orthogonal as in English; thus, whereas French has two aspectually different forms for the past (*imparfait* for IMPERFECTIVE, *passé composé* for PERFECTIVE and/or PERFECT<sup>3</sup>) there is no such differentiation for PRESENT or FUTURE. Second, the lexical verb in French is often preceded by a cluster of clitic elements, such as *in je l'ai vue; i l m e l a donne; i l m e l'a donné; elle n e m e l a donne pas,* etc. Note that, for example, combinations such as *l'a* and *l a* sound exactly alike, and hence the learner may easily be tempted to reduce the difference in *i l m e l a donne* and *i l m e l'a donné* to a difference in the suffix. It should be clear that clusters of this type are a major learning problem in untutored acquisition. We shall now see

<sup>3</sup>This question is much disputed and in fact quite unclear. For present purposes, we will not try to differentiate between these two interpretations and simply speak of +PERF. Note that the *passé simple* which is also said to have a particular aspectual function is hardly ever used in everyday spoken language - at least the native interlocutors in all encounters do not use it - and is therefore ignored in the present study.

how Abdelmalek, a young Moroccan who came to Marseille at the age of twenty, handles these problems. He was recorded at monthly intervals over thirty months. He is a very vivid storyteller, and most encounters abound with long and rich narratives. We describe his linguistic development in five major steps.

*AEI first encounter (fourteen months after arrival)*

At this point, Abdelmalek's language can be characterised by three features:

- (a) There are no auxiliaries, and there is no functional inflexion. But in contrast to Lavinia in the first encounter, his language exhibits a strong variation in verb forms. Verbs appear in up to nine variants, for example *dormir*<sup>4</sup>: [dorm, edorm, edormi, iladormi, ladorm, ladormi, lidorm, lidormi]. All of these forms mean what in Standard French would be expressed by *j'ai dormi*. Two points seem very clear. First, in Abdelmalek's language, *form variation precedes functional variation*. He is aware of the fact that French has different verb forms, tries to imitate them and in doing so attributes more variation to the French verb than in fact there is. But he has no clear notion of what they mean. Second, both the beginning and the end of the form vary, where initial variation apparently conflates clitic personal pronouns, both subject and object, and auxiliaries.

- (b) He makes systematic use of a small number of adverbials:

TAP: *alors, après, comme* + clause, [*safe*] *trois mois* 'then, after(wards), when + clause, three months ago.'

TAQ: *toujours, jamais, (numeral) fois* 'always, never, (numeral) times'.

TAD: Duration is indicated by numeral + N, for example *trois jours* 'for three days'.

Other adverbials, such as *aujourd'hui, demain, hier, déjà* 'today, tomorrow, yesterday, already' are only used when scaffolded by the interlocutor. But not long afterwards, he uses them spontaneously.

- (c) In general, utterances of a narrative are strung together by PNO.

<sup>4</sup>Passages in [...] are (broad) phonetic transcription. Such a transcription is occasionally indispensable because an orthographic transcription often implies a particular semantic interpretation. Consider, for example [parlé], which corresponds to either infinitive *parler*, or imperative *parlez* or to past participle *parlé*, or else to past *parlait* (in Southern French pronunciation).

The following short extract illustrates his language at this point (he is talking about his adventurous arrival in France):

*après [ale] le voiture la commissariat*  
'then go the car the police station'  
*la commissariat "comment [sapel]*  
'the police station "what's name?'  
*pourquoi [ãntre] la France la montagne?"*  
'why enter France the mountain''  
*parce que moi [l'etravaj] l'Espagne [jana] l a carte d e séjour*  
'because me work Spain there is stay permit  
*d'Espagne*  
'of Spain'  
*après [ilaparle] la telegramme*  
'then he speak the telegramme'  
*[se] pas [liparle] comment ça [liparle]*  
'know not he speak how this he speak'  
*après [ilasini] les comment?*  
'then he sign the whatsit?'  
*la commissariat une heure*  
'the police station one hour'  
*après [ale] la fourgonette*  
'then go the van'

At this stage, Abdelmalek's system is essentially like Lavinia's - it is the basic variety, the only difference being that Abdelmalek shows a remarkable degree of formal variation.

*AE2 (after twenty-one months of stay)*

There are two salient developments:

- (a) His repertoire of adverbial constructions is much richer. This applies to TAP and TAD, less so for TAQ (although there are first occurrences of *encore*, used in the sense of 'another time, again'). He also uses them quite systematically to mark the time talked about: PNO is still observed, but increasingly complemented by explicit marking;
- (b) Although most verb forms are still in free variation, there is an incipient functional differentiation between two form types. The

first, here called V, is the bare stem. The second, here called Ve, shows up in a number of variants: it consists of (a) the stem; (b) a suffix, which is either [e] or [i], depending on the verb ([dormi] versus [done]); and (c) sometimes a prefix [e] or [a]; examples are [edone], [adone] or - most often - simply [done].

Abdelmalek's use of this contrast is not fully consistent. Initially, he uses V only for [+E, -DS] verbs, and Ve only for [+DS] verbs, that is, roughly for state verbs and event verbs, respectively. He then reinterprets the contrast such that V marks IMPERFECTIVE or PROSPECTIVE, and Ve marks either PERFECTIVE, PERFECT or JUST PAST. There are not sufficient clear examples to discriminate between the aspect reading and the tense reading of Ve.<sup>5</sup>

*AE3 (after twenty-four months of stay)*

We note several clear developments. They concern adverbials, complex verb constructions and verb morphology:

- (a) His adverbial constructions have become increasingly complex. This is most clear for TAP, as is illustrated by examples such as:

*maintenant la fin d'année fife] quatre ans*  
 'now the end of year it makes four years'  
 <= at the end of this year, it will be four years ago>

*[safe] aujourd'hui quatre jours*  
 'this makes today four days'  
 <= it is now four days ago>

He now regularly uses all frequent TACS, such as *déjà*, *pas encore*, *ne plus* 'already, not yet, no longer', and others. Although this considerable increase in his TA repertoire brings him quite close to the target, there are still a number of interesting gaps and errors. Thus, the TAQ *chaque fois* is still used in the sense of 'sometimes', as he even states explicitly at one point:

*non chaque fois [se ] pas toujours*  
 'no, "chaque fois" is not "always"'

<sup>5</sup>In fact, the French past participle combines a tense component and an aspect component, and it may well be that this is reflected in Abdelmalek's language at this point.

- (b) He starts to use complex verb constructions to mark particular temporal properties such as inchoativity. Some of those correspond to Standard French, such as *commencer à V* 'to begin to V'. But others are his own brand, for example:

*matin à six heures [fe a mars]*  
'morning at six o'clock start to walk'

*le train il [pas] il [fe a mars]*  
'the train it pass by it starts to go'

- (c) Whilst (a) and (b) show distinct progress, this is much less clear for verb morphology. We note, first, a stabilisation of the V: Ve distinction as a marker of ±PERF. At the same time, however, this distinction is also used to mark a different semantic contrast: V is used for generic or habitual events, and Ve is used for singular events in the past. Compare the following two extracts:

*il [vj~e] il [done] la clé il [madi]*  
he come he give the key he say

Here, he talks about a particular incident in the past. In the following sequence, he describes what normally happens in a sales interaction:

*moi je [demãd] 160 francs il [don] rien*  
'I, I ask-for 160 francs, he give nothing'

*l'autre il [madi] "non je [don] 140"*  
'the other he say "no I give 140"'

*moi je [di] "non 160 francs"*  
'me, i say, "no, 160 francs"'

*et je [vãdr] 150*  
'and I sell 150'

In other words, he now entertains three different hypotheses about what the suffix-contrast V versus Ve means: stative versus non-stative, -PERF versus +PERF, generic versus singular. The first of these seems to fade away, whereas the other two are in full competition.

He has no clear solution to the morphological variation at the beginning of the verb. But there is one interesting and quite systematic contrast, well illustrated by the short extracts above: quoted speech by the speaker is normally introduced by *je [di]*, quoted speech by a third person by *il [madi]*. Most likely, this contrast is based on the Standard forms *je dis* and *j'ai dit*, on the one hand, *il m'a dit*, on the other. But he seems to analyse the 'prefix' *ma-* as a kind of third person marker.

*AE4 (after thirty-three months of stay)*

There is no qualitative jump (except that now all of a sudden, the adverbial *chaque fois* is correctly used), but some tendencies have stabilised. Of the three hypotheses about the function of V versus Ve, the first one has disappeared, whereas the other two still coexist. The difference between *je [di]* versus *il [madi]* is firmly established, and there is some evidence that this contrast is extended to other verbs. There are some first occurrences of the copula in first person, i.e., *je suis*.

*AE5 (after forty-three months of stay)*

At the end of the observation period, Abdelmalek's system of temporal adverbials is rich, complex, and quite close to the Standard. (This does not exclude occasional errors.) He also has a rich repertoire of complex constructions to mark the beginning or end of a situation, such as *commencer à*, *finir de*, etc. On the other hand, he has not disentangled the mysteries of French verb morphology. What he has achieved, though, is the skeleton of an idiosyncratic learner system, which includes the following characteristics:

1. The clitic subject pronoun is seen as a separate part of the preverbal complex;
2. The feature +PERF is marked by [ma]-V, and the feature -PERF by [e]-V; this distinction applies only to third and (rarely documented) second person;
3. In the first person, +PERF is often marked by Ve, and -PERF by V. But there are a number of counter-examples; in particular, this morphological difference can also mark singular versus generic. Moreover, there are no convincing cases of +PERF which relate to the present; hence, +PERF and PAST are typically conflated;

4. The copula is regularly used, and there is a clear tense marking contrast by [e] versus [ete].

We should stress that these characteristics do not constitute a stable system. There is still a considerable amount of free and (to us) unexplainable form variation. But his attempts to interpret the abundant form variation offered by the input in his own way are quite clear. Note that this is his system after more than three years of stay in France. We have no idea whether he came any closer to the Standard in the months after our observation.

### 3.4 General results

#### *Commonalities and divergencies*

As one goes along the development of the twenty learners, one notes a number of peculiar, accidental, and sometimes odd features, notably in the choice of the particular lexical items which they successively acquire. But there are also many commonalities, notably in the development of structural properties. It will be instructive to start with a short list of some of those common features, which will be taken up in the following subsections:

1. In the beginning, all utterances of a learner, irrespective of SL and TL, typically consist of (uninflected) nouns and adverbials (with or without preposition), rarely a verb and never a copula. That means that there is hardly any explicit marking of structural relations, such as government, and *there is no way to mark temporality by grammatical means*.

It is also noteworthy that the kind of lexical repertoires are remarkably similar in nature for all informants (cf. Broeder *et al.* 1988, Dietrich 1989).

2. The strategies to express temporality at this point are very similar - both in the way in which learners use individual lexical items and in the way in which they use discourse strategies and contextual information.

For example, calendaric adverbs are used to locate a situation in time, and boundaries are marked by some lexical items such as *begin - finish* in English or *burja - slöta* in Swedish.

3. Among the various domains of temporality, priority is given to localising the event in time.

This is in remarkable contrast to the importance which is often assigned to the role of aspect in different languages and also in first language acquisition. This observation also applies to the development of grammatical categories. If TL has morphological means both for tense and aspect, such as English, clear preference is given to the former. We should note, though, that in some cases, it is not easy to distinguish between aspect and tense marking, as is the case with the French *passé composé*.

4. Among the various interacting ways to make temporal constellations clear, pragmatic devices precede lexical ones and these in turn precede grammatical ones.

In a way, this already follows from the preceding three points. But when tracing the development of our twenty learners, one almost gets the impression that at least for many of them, the acquisition of a lexical item is only necessitated because pragmatic means do not suffice, and grammatical means are worked out - in some cases - because lexical means do not suffice. We shall return to this point.

As was said above, there are also a number of differences. They are partly, and in a very obvious way, caused by the peculiarities of the target languages, and also by the different living conditions of the learners. But by far the most salient difference can be characterised by the slogan 'fossilisation - yes or no?'. Some learners stop their acquisition at a level which is very far from the language of their social environment and may even be beneath what one would assume to be necessary for everyday communication. Others go on and come very close to the target. No one really achieves native-like competence, but some learners, such as Ayshe (TL German) or Lavinia (TL English) are not so very far off at the end of the observation period, and it is at least not implausible to assume that they eventually achieve it. What we note, therefore, is the following fact:

5. There is strong similarity in the *structure* of the acquisition process, but considerable variation in *final success* (and also, a point not mentioned so far, in its *speed*).

In the following sections, we shall work out these general observations. First, the overall structure of development is sketched. Then, we will spell out some general rules for the order in which the various means to express temporality are acquired. Finally, we deal

in a more general way with the various factors that might influence development.

*The overall structure of the acquisitional process*

The acquisition process, as observed here, gives the general impression of being continuous and gradual, without really sharp boundaries between the various learner varieties. But when looked at from some distance, it appears that a decisive step in development is a learner system which we call the 'basic variety' and which, in this and similar forms, has been observed in a number of other studies (Klein 1981; Flashner 1983; Kumpf 1983; von Stutterheim 1986; Schumann 1987). Accordingly, we can divide the entire acquisitional process into three major steps: A. Pre-basic varieties; B. Basic variety, and C. Further development.

*Stage A . Pre-basic varieties.* Pre-basic varieties are the learner's first attempts to make productive use of what he or she has picked up from the new language. Essentially, they can be characterised by four properties:

- (a) They are lexical: they consist of simple nouns, adjectives, verbs, adverbials and a few particles (notably negation). Verbs are used 'noun-like', in the sense that there is no clear sign of syntactic organisation, such as government. There are also a number of rote forms which, for this purpose, can be considered to be individual lexical items;
- (b) There is no functional inflexion. This does not exclude the use of inflected forms, for example present tense verb forms; but either there is only one such form, or if there are several (cf. above, Abdelmalek), they are in free variation;
- (c) Complex constructions, if they appear at all (and except rote forms, of course), are put together according to pragmatic principles, such as 'Focus last', etc. (cf. chapter I.1 of this volume). This also applies to text organisation. If there is any coherent sequence of utterances, explicit linking devices such as anaphoric elements are absent; what is obeyed, however, is PNO;
- (d) They are heavily context-dependent; but with the exception of deictic pronouns, which appear before anaphoric pronouns, there is no structural context-dependency; context operates in a very global fashion.

This means that for the expression of temporality all one finds are some adverbials, or rather adverb-like expressions, notably 'calendaric noun phrases' such as *Sunday, morning, nineteen hundred and seventy*, etc. - and, of course, PNO. Basically, the localisation of the situation is left to the interlocutor.

We do not note, incidentally, that the learner's language at this point is a kind of 're-lexification', in the sense that utterances consist of a word-by-word replacement of source language constructions. This language is 'constructive', poor as the construction may be, and there is hardly any trace of source language influence.

Among our learners, only a few were observed in this stage, because the encounters started at a point where most of them had already reached the subsequent stage. (This, to be clear, is something we cannot prove. It might well have been the case that the other learners started in a very different way; but it seems highly unlikely. Furthermore, many learners were observed to backslide, producing utterances characterised by (a-d) on occasion.)

*Stage B: The basic variety.* At some point in their development, all learners analysed in this study (except the Turks with TL German who had initial teaching) achieved a variety with the following formal properties:

1. Utterances typically consist of uninflected verbs with their arguments and, optionally, adverbials. There is no case marking, and, with the exception of rote forms, there are no finite constructions. In contrast to the pre-basic varieties, the way in which the words are put together follows a number of clear organisational principles which are neither those of SL nor those of TL (for details, see chapter I.1 of this volume);
2. Lexical verbs occur in a *base form*, and there is normally no copula.<sup>6</sup> The form chosen as a base form may differ. Thus, most learners of English use the bare stem (V), but also *Ving* is not uncommon. Learners of other languages may use the infinitive (German) or an even a generalised inflected form (as often in Swedish). The Turkish learners of Dutch use the infinitive, the Moroccan learners of Dutch the bare stem;

<sup>6</sup>There is often a copula in quoted speech, though. If anything, this shows that learners at this point have a clear idea that there could be, or should be, a copula - they just do not integrate it into their own productive language. Basic varieties are not bad imitations of the target - they are languages with their own inner systematicity.

3. There is a steadily increasing repertoire of temporal adverbials. Minimally, it includes:
  - (a) TAP of the calendaric type (*Sunday, (in the) evening*);
  - (b) anaphoric adverbials which express the relation AFTER (*then, after*), and also typically an adverbial which expresses the relation BEFORE;
  - (c) some deictic adverbials such as *yesterday, now*;
  - (d) a few TAQ, notably *always, often, one time, two time, etc.*;
  - (e) a few TAD, normally as bare nouns, such as *two hour, four day, etc.*

Adverbials such as *again, still, yet, already* do not belong to the standard repertoire of the basic variety;

4. There are some *boundary markers*, i.e., words (normally verb forms), which mark the beginning and the end of some situation, such as *start, finish*; they are used in constructions like *work finish*, 'after work is/was/will be over'.

These are the common features of the basic variety. There is some individual variation; for example, we occasionally find a subordinate conjunction, typically *when* which helps to express temporality (see below). But all in all, the picture is quite uniform, and basic varieties only differ with respect to the richness of the lexicon.

As for the *functioning* of the basic variety, the examples quoted above look very 'basic' indeed. One does not get the impression that the basic variety, as characterised above, provides its speakers with powerful means to express temporality. It has neither tense nor aspect marking, hence the the linguist's pet categories for the expression of time are entirely absent. Compared to the rich expressive tools for temporality in any of the source languages or target languages, this seems to impose strong restrictions on what can be expressed. This impression is premature. What the basic variety allows is the specification of some time span - a relatum -, its position on the time line, its duration and (if iterated) its frequency. The event, process or state to be situated in time is then simply linked to this relatum. All the speaker has to do now is shift the relatum, if there is need. More systematically, we can describe the functioning of the basic variety by the following three principles.

- I. At the beginning of the discourse, a time span - the initial Topic time TT<sub>1</sub> - is fixed. This can be done in three ways:

- a) By explicit introduction on the informant's part (e.g. *when Italia* 'when I was in Italy'); this is regularly done by a TAP in utterance initial position;
- b) by explicit introduction on the interviewer's part (e.g. *what happened last Sunday?* or *what will you do next Sunday?*);
- c) by implicitly taking the 'default topic time' - the time of utterance. In this case, nothing is explicitly marked.

$TT_1$  is not only the topic time of the first utterance. It also serves as a relatum to all subsequent topic times  $TT_2$ ,  $TT_3$ , ...

- II. If  $TT_i$  is given, then  $TT_{i+1}$  - the topic time of the subsequent utterance - is either maintained, or changed. If it is maintained, nothing is marked. If it is different, there are two possibilities:
  - a) The shifted topic time is explicitly marked by an adverbial in initial position;
  - b) The new topic time follows from a principle of text organisation. For narratives, this principle is the familiar PNO 'Order of mention corresponds to order of events'. In other words,  $TT_{i+1}$  is some interval more or less right-adjacent to  $TT_i$ .

As was mentioned in section 2, this principle does not govern all text types. It is only characteristic of narratives and texts with a similar temporal overall organisation - texts which answer a quaestio like 'What happened next?' or 'What do you plan to do next?'. Even in these texts, it only applies to the main structure of the text. In other text types, such as descriptions or arguments, PNO does not apply, nor does it hold for side structures in narratives, those sequences which give background information, comments, etc. In cases such as these, changes of TT must be marked by adverbials.

Principles I and II provide the temporal scaffolding of a sequence of utterances - the time spans about which something is said. The 'time of situation' of some utterance is then given by a third principle:

- III. The relation of TSit to TT in the basic variety is always CON, i.e., 'more or less simultaneous'. TT can be contained in TSit, or TSit can be contained in TT, or both, i.e., they are really simultaneous. In other words, the basic variety allows no aspectual differentiation by formal means.

This system is very simple, but extremely versatile. In principle, it allows an easy expression of what happens when, or what is the

case when, provided: (a) there are enough adverbials, and (b) it is cleverly managed. Therefore, one way to improve the learner's expressive power is simply to enrich his vocabulary, especially (but not only) by adding temporal adverbials, and to learn how to play this instrument. Exactly this is done by one group of learners, who never really went beyond the basic variety, but still improved it in these two respects. In the present study, Santo, Angelina, Mahmut, Zahra and Rauni represent this group.<sup>7</sup>

But there is a second group of learners who indeed leave this poorly but sufficiently furnished house and start the long march towards the target language. This further development is much less homogeneous, and in a way, it is somewhat misleading to speak of a 'third stage'; it is rather a group of stages which, however, also show some commonalities.

*Stage C : Development beyond the basic variety.* The basic variety is relatively neutral with respect to the specificities of the target language. Except for the choice of the particular lexical items, its structure and function is more or less the same for all learners, irrespective of SL and TL. It seems plausible that the basic variety reflects more or less *universal* properties of language. This changes, and has to change, if development proceeds. The learner has then to adapt to the peculiarities of the language to be learned. As a consequence, it becomes more difficult to identify *general* properties of this development. But this does not mean that the further path of individual learners is entirely idiosyncratic. Four common features were observed in the development of the advanced learners:

1. *Initially, there is coexistence of various morphological forms without appropriate functions.* The learner would use, for example,  $V_0$  and *Ving*, or various present tense forms, or even complex periphrastic constructions, without a clear and recognisable functional contrast, be it the one of TL contrast or some learner-variety internal contrast. In a phrase: *Form precedes function*, or more precisely: formal variation precedes functional use.

What this seems to hint at is the fact that in this case at least, language acquisition is not dominantly driven by communicative needs but by some other factor. We shall return to this point shortly.

2. *Further development is slow, gradual and continuous.* There are no distinct and sharp developmental steps. This applies, on the

<sup>7</sup>The fossilised learners described in Klein (1981) or in von Stutterheim (1986) are of exactly this type. They have become, so to speak, masters in playing the one-string guitar.

one hand, to the increase of vocabulary, in particular, of temporal adverbials which increase the learners' communicative power. It also characterises the way in which full control of the appropriate functional use of forms is achieved. For a long time, we observe a coexistence of correct and incorrect usages from the point of view of the TL, and learning is a slow shift from the former to the latter, rather than the product of a sudden insight. In this respect, *language acquisition resembles much more the slow mastering of a skill, such as piano playing, than an increase of knowledge, such as the learning of a mathematical formula.*

This may seem a trivial observation; but it is in remarkable contrast to predominant views of the process of language acquisition.

3. *Tense marking precedes aspect marking.* All SLs of this study have grammatical tense marking, and only some of them have grammatical aspect marking; but the others allow aspect marking by various types of periphrastic constructions. Whatever type of SL the learner has, tense is acquired first. It is true that learners of English may have perfect and progressive *forms* at an early stage (and the extent to which these forms are observed depends on the TL), but in no case do we observe an early clear *functional use* of these forms.

This is in remarkable contrast to what has often been assumed (and disputed) for Pidgins and pidginised language varieties (Bickerton 1982) and for first language acquisition (Weist 1986). The learners of the present study do not feel a particular urge to mark aspectual differentiation.

4. *Irregular morphology precedes regular morphology.* In all languages involved, past tense formation, for example, is very simple for the regular forms, whereas irregular past is often a nightmare. Still, the learners of our study tend to overlook the simple rules of the former and to start with the complexities of the latter. (There is one clear exception - the Turkish learners of German.)

This points to the fact that the acquisitional processes observed here are not so very much characterised by 'rule learning', such as 'add *-ed* to the stem' but by picking up individual items of the input and then slowly, slowly generalising over these items.<sup>8</sup>

<sup>8</sup>This is not the case, of course, for the Turkish learners of German. They were explicitly taught how to construct the weak German perfect, and they have internalised this rule. To that extent, their acquisition process is indeed a different one.

Irregular verbs are typically frequent and the morphological differences are perceptually salient (compared to a regular ending such as English *-ed*, which may be hard to process for many learners). *Second language acquisition, as observed here, is inductive and heavily input-oriented.*

Obviously, these four properties of acquisition beyond the basic variety simplify the real picture. As is normally the case with generalisations, a number of details and idiosyncrasies have had to be neglected<sup>9</sup>.

### *Causal considerations*

In this paragraph, we will briefly discuss why some learners fossilise at the level of the basic variety, whereas others go beyond that stage.

The advantages of the basic variety are obvious: it is easy, flexible, and serves its purpose in many contexts. And these advantages may be sufficient for many learners to maintain it, with some lexical improvements. But not all do. Two reasons might push further development.

First, the basic variety strongly deviates from the language of the social environment. It may be simple and communicatively efficient, but it stigmatises the learner as an outsider. For first language learners, the need for such *input imitation* is very strong; otherwise, they would not be recognised and accepted as members of their society. For second language learners, this need is not necessarily so strong, although it depends to a much greater extent on the particular case. Second, the basic variety has some clear shortcomings that affect *communicative efficiency*. Four of these come to mind:

- (a) The absence of some 'subtle' (TAC) adverbials, such as *already*, *yet* limits the expressive power of the system. This, of course, can be overcome simply by learning these words, without changing the system as such (much in the same way in which new nouns are learned);
- (b) The basic variety does not allow its speakers to mark at least some types of aspectual variation. There is no way, for example, to differentiate between *h e was going* and *h e went*, that is, between 'TT included in TSit', and 'TSit included in TT'. It is possible, though, to differentiate between 'TSit CON TT'

<sup>9</sup>These idiosyncrasies are carefully documented in Bhardwaj *et al.* (1988), where the reader may also observe the process of distilling the generalisations presented in this chapter.

and 'TSit BEFORE TT', because the basic variety normally has boundary markers;

- (c) The pragmatic constraints on the positioning of TT easily lead to ambiguities. Suppose there are two subsequent utterances without any temporal adverbial, and suppose further that TT<sub>1</sub> - the topic time of the first utterance - is fixed. Where is TT<sub>2</sub>? If the two utterances are part of a static description, then TT<sub>2</sub> is (more or less) simultaneous to TT<sub>1</sub> - there is normally no temporal shift in, say, a picture description. If the two utterances belong to a narrative, then it depends whether both utterances belong to the 'foreground' or not; if so, then TT<sub>2</sub> is AFTER TT<sub>1</sub>; if not, TT<sub>2</sub> is simply not fixed. So long as the speaker is not able to mark the difference between 'foreground' and 'background', for example by word order, ambiguities are easily possible, and are indeed often observed in learner's utterances, to the extent that the entire temporal structure of the text becomes incomprehensible;
- (d) There is no easy way to discriminate between 'single case reading' of some situation (event or state) and 'habitual' or 'generic reading'. An utterance such as *when Italy, I go Roma* can mean 'when I was in Italy, I once went to Rome', but also 'when I was in Italy, I used to go to Rome'. In both cases, TT is in the past; but it may include one or many TSits. Learners may feel the need to discriminate between semelfactive and habitual reading, and do so by an initial adverbial *normal(ly)*, which, when interpreted literally, often sounds somewhat odd (*normal, go disco*).

All of these problems affect the efficiency of the basic variety, and may easily lead to misunderstanding and even breakdown of communication (cf. chapter II.1 of this volume). If the learner considers it important to increase his communicative capacity, he has to improve the system. This can be done in two (not mutually exclusive) ways. He can either try to adopt as many rules of the target variety as possible. Or he can try to turn his basic variety into a sort of 'fluent pidgin' and learn how to make optimal use of it. The latter way leads to a more or less fossilised but relatively efficient version of the basic variety, the former towards the norms of the language of the social environment. Note that only the problems mentioned under (a) and (b) above are easily overcome by progressing towards Standard English. The problems mentioned under (c) are not directly affected by

such progress, because the pragmatic constraints are the same in the basic variety and in the fully developed language, and English does not formally discriminate between 'habitual' and 'semelfactive'<sup>10</sup>.

Our observations above about development beyond the basic variety clearly indicate that the first factor, the subjective need to sound and to be like the social environment, outweighs the other factor, the concrete communicative needs. Learners try to imitate the input, irrespective of what the forms they use really mean, and it is only a slow and gradual adaptation process which eventually leads them to express by these words and constructions what they mean to express in the target language.

*Temporal expressions: what after what?*

In the preceding section, we gave an overall picture of the developmental process and considered some of the causal factors which may determine its course. This picture includes the expression of temporality longitudinally but it is not limited to this area. It also reflects the overall development of learner varieties, for example the principles which underly utterance organisation at various levels. In this section, we shall deepen the picture by a more specific look at the sequencing of temporal expressions.

Many factors interact in the expression of time. These include, among others:

- (a) the *type of content* which the speaker might want to express; temporality is not a homogeneous conceptual category: it involves various kinds of temporal relations, inherent temporal features, etc;
- (b) the *type of expression*; there are various grammatical and morphological means, and a temporal relation such as BEFORE might be expressed by either of them, or by an interaction of both;
- (c) the *role of contextual factors*; only part of what is meant is made explicit; others parts are left to the context; this is not only illustrated by deictic expressions such as tense or adverbials like *yesterday* but also by global principles such as PNO.

One might imagine, in the acquisition of temporality, a sequence which is entirely determined by one of these factors, for example the kind of temporal relation to be expressed, or the morphological complexity of the expression. This is not what was observed. Many

<sup>10</sup>Similarly, the learner who progresses towards Standard German will get no help with problem (b), as German does not grammaticalise aspect.

factors play a role, and it is their interaction which leads to the observed sequences. We cannot claim that the nature of this interaction is entirely clear; but there are a limited number of distinct tendencies which we can state by the following six rules.

*R1. From implicit to explicit*

Initially, many components of the content which the listener should know are left to context and to inferences, rather than being made explicit by words and constructions. There is much scaffolding by the interlocutor and much reliance on 'default assumptions', that is, assumptions on what is normally the case and would be expected in a given situation. This rule may be almost trivial in the very beginning, because the learner simply has no means to make contents explicit. But as soon as the basic variety is reached, there is little left that could *not* be made explicit. If, for example, a personal narrative is told, there is no reason to state time and again that the events talked about are in the past. But exactly this is done by the learner who learns and uses tense marking correctly. Similarly, there is often no reason at all to mark the relation AFTER by explicit means such as *then, dann, toen, après, sédan* if PNO does as well. Still, the tendency is clearly to do it - to go from implicit to explicit.

*R2. From lexical to grammatical*

If some meaning component is not left implicit, it can be expressed in various ways. Take a relation such as 'Time A BEFORE Time B' which can be marked by either a tense morpheme or by adverbials such as *before* or, more specifically, *yesterday*. Here, lexical means clearly come first. The basic variety gets along with these means (and reliance on context), and only afterwards, grammatical means are slowly developed, with minimal gain in expressive power and substantial cost in formal complexity.

*R3. From simple to complex*

What is meant here is the simplicity of the expression. Elements of the pre-basic variety are usually short words. Prepositional phrases of the TL are truncated to noun phrases which in turn tend to have the form of bare nouns. Bare verb stems are used. As grammatical categories are acquired, forms that are clearly compound, such as the regular past in English, are avoided in favour of morphologically simple forms, such as (normally) the irregular forms.

Of course, one might argue that R3 is all too obvious because in

the beginning, learners would simply be unable to process expressions of higher morphological complexity. This is blatantly contradicted by at least one clear exception to this rule: these are rote forms, which may have a remarkable complexity, and are used right from the beginning. It is likely that their composition is not very transparent to the learner. But still, he is able to understand and to use them.

*R4. From topological relations to order relations*

This is the first rule which has to do with the particular meaning to be expressed. As was said in section 2, temporal relations may be of the type 'Theme BEFORE Relatum' and 'Theme AFTER Relatum', but they may also be of the type 'Theme IN Relatum', 'Theme CON Relatum', etc. In acquisition, the former tend to be explicitly expressed after the latter. This applies to adverbials as well as to the development of tense forms. It should be stressed that R4 is indeed only a tendency which allows for many exceptions. Still, this tendency to express topological relations first does exist, whatever the reasons behind it may be.

*R5. From AFTER to BEFORE*

Among the order relations, those which place the Theme after the Relatum - such as *then, later, after* - tend to come before those which express the relation BEFORE, such as *before, (x days) ago*, etc. Again, this is only a tendency, and it may seem contradicted by the order in which tense marking is acquired. Here, past tenses clearly come before future tenses. But this may simply reflect the fact that, on the one hand, the informants talk more about the past than the future, and on the other, that future marking is less common in the target languages, anyway.

*R6. From deictic Relatum to anaphoric Relatum*

If a temporal relation is marked, then the Relatum can either be explicitly specified, or given in context. In the latter case, we have to distinguish between deictic Relata (*now, yesterday*) and anaphoric Relata (*later, before*). Again, as a tendency, the former are used before the latter. There is a remarkable parallelism of this rule to the order in which personal pronouns are acquired. As we saw in chapter I.1, deictic pronouns, such as *I, you* typically show up before anaphoric pronouns (*he, she, they*).

It is worth repeating that these six rules are not rigid principles but tendencies. In particular, they may contradict each other, for

example if a morphologically complex deictic expression and a morphological simple anaphoric expression compete. These conflicts are solved in different ways, and we are not in the position to make general claims about this interaction. But it seems beyond doubt that R1 - R6 indeed reflect strong 'determining forces' in the acquisition of temporality.

*Final causal considerations*

In Volume I:1, it was said that the entire process of second language acquisition can be characterised by three dependent and three independent variables. The former are the structure, speed and final result of the process, the latter are access to the target language (notably type and amount of input), learning capacity (including previous knowledge of the learner) and propensity (including motivation). How can we phrase our findings in the light of these six variables?

What has been said in this chapter about the dependent variables basically concerns the structure of the process and its final result, which is either an elaborate basic variety or a variety which, for temporality, comes close to the target language. Less was said about the speed of the process; here, the available evidence hardly allows any generalisation, except perhaps that the tempo of acquisition looks generally very slow, compared to first language acquisition, for example.

Causal considerations concentrated on different types of motivation - communicative needs versus social similarity, and it was concluded that it is the second factor which pushes learners beyond the basic variety. Little has been said, and can be said, about the input, except that intensity of interaction favours the learning process. This is perhaps not too surprising. But there is a less trivial correlate of this fact: *Duration of stay is a n uninteresting variable.* What matters is the intensity, not the length of interaction. Therefore, ordering learners according to their duration of stay is normally pointless because it is too crude a measure for what really matters: intensity of interaction. The findings for temporality and those for richness of vocabulary completely accord in this respect (see Volume I:8.3).

This leaves us with a third causal factor, or group of factors - the learning capacities which the informant brings with him on entering the new linguistic environment. Roughly speaking, these learning capacities have two components (cf. Klein 1986): the biologically given (and biologically constrained) 'language processor' which allows him to analyse new input and to transform the result into active compe-

tence, on the one hand, and the 'available knowledge', in particular his knowledge of the source language, on the other. What can be said about these two components? All learners studied here were cognitively developed at the time of arrival. Does this fact affect their 'language processor', as is often assumed by theories of language acquisition? The answer is 'yes and no'. The evidence gathered in this study clearly shows that

- a) the acquisition process is in general very slow;
- b) it regularly leads to the formation of a communicative system, the basic variety, which is not observed for first language acquisition;
- (c) it often fossilises at this level.

This is distinctly different from the learning process of children. On the other hand, there are a number of learners who approach the target variety to a degree where it is at least very similar to a native speaker's competence. *We have no evidence that an adult second language learner is in principle unable to achieve full mastery of the target language* - as far as the expression of temporality is concerned. This does not exclude, of course, that such changes of the 'language processor' might exist for other domains of language, such as phonology or intonation. In other words, second language acquisition is definitely not like first language acquisition for the acquisition of temporality. But there is no evidence that this is due to a biological, age-related change in the language-learning capacity.

The other component of the learning capacity is the learner's knowledge of his or her own language. Here again, the observations are not entirely clear-cut. We do note some transfer phenomena. For instance:

- learners occasionally use SL words; but these lexical borrowings mostly concern nouns and verbs, hardly ever words which would express temporality: there are some examples, such as Italian *poi*; but they are rare;
- the choice of the base form in the basic variety occasionally varies with SL; the clearest cases are the Turkish and Moroccan learners of Dutch, where the former prefer an infinitive and the latter the bare stem; it is not implausible that this preference reflects the rich Turkish suffix morphology compared to the typical stem changes in Arabic; we note similar differences for Italian and Punjabi learners of English.

There are some other phenomena of this type; but all in all, they are remarkably rare. What is much more striking, is the *lack of SL influence* where one would expect it. Some of the SLs have a distinct aspect marking, others do not. But we have no evidence that this difference plays a significant role. We must conclude, therefore, that there is no significant SL influence in the acquisition of temporality.

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