2 Concluding remarks

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2.1 Introduction

The chapters in this volume sum over about two and a half years in the second language acquisition of forty adult learners, or subsets of these learners, whose paths towards a TL were selectively described. An appeal was made to a limited number of factors to account for their success, or lack of success.

In reconstructing these learners' progress, we have examined their discourse activity in various tasks over time in the quest for patterns of behaviour that reflect their underlying capacities, and the development of these capacities, in regard to particular types of linguistic phenomena. The data could only *sample* learners' performances at different points of time, and much space has been devoted, from Volume I:6 onwards, to discussing the reliability and validity of the techniques we used, in relation to the different research areas. The results illustrate an approach which involves looking in detail at how learners go about solving the task at hand. The previous chapters have of necessity abstracted away from the detailed analyses from which the results were distilled; these analyses are to be found in the six research reports submitted to the ESF.

This final chapter is necessarily very selective: our concluding remarks will take up the questions and hypotheses of Volume I again, compare them with some general tendencies, and suggest some lines of further research. We also return (in 2.5) to the question first mooted in Volume I:1.2, of the relationship between the study of ALA and the study of linguistic systems in general. We start with questions of language use (2.2), then go on to summarise the developmental sequences found (2.3), before final discussion of the determining factors (2.4). In other words, this chapter takes the three research questions of Volume I:1 in reverse order.

2.2 Question III: 'The characteristics of communication between native and non-native speakers of a language'

The everyday communication experienced by the learners studied in these volumes is difficult, because asymmetrical: their interlocutors are native speakers and, often, gatekeepers. Learners have 'a constant struggle to make meaning in a negative learning environment' (Part II:1.5 of this volume), where to admit to inadequate command of the TL is potentially face-threatening for them. These characteristics highlight the difference between the learning environment studied here, and that of children, and of classroom learners of a foreign language. Part of our data captured these characteristics, while other techniques - friendly, unhurried learner/researcher conversation especially - is far removed from everyday contact, which may explain why some learners saw conversation as a pedagogic opportunity.

In Volume I:1.5 we mentioned the paradoxical situation of these learners, who have to communicate in the TL in order to learn it, and to learn the TL in order to communicate in it. Feedback mechanisms allow for the fulfilment of some basic communicative requirements, and we have seen that learners quickly build up a basic system of three-five multifunctional particles allowing the eliciting and giving of information about contact, mutual perception and understanding. This system comes partly to supplant an initial heavy reliance on repetition of key words, which is a strong indicator of learners' initial attempts to understand items in the input. The relative frequency of use of repetition versus simple feedback particles is partly determined by the cross-linguistic characteristics of the source and target feedback systems (Part II:2.3 of this volume). Repetition (or 'reprise': taking up the other's words and analysing them aloud) allows a double indication of either what has, or what has not, been understood in order that the TLS may either build on previous turns, or remedy trouble.

A later and more sophisticated sort of 'repetition' is some learners' use of quoted speech. Quoted speech is often 'correcter', that is, it shows a closer approximation to the TL, than learners' own spontaneous speech, and is a powerful indicator of their analysis of the input as it points to areas where the 'passive' comprehension skills are in advance of production. Indications from this study are that the first verbs used with sentential complementation are the frames of directly and indirectly represented speech and thought.[1] Learners'

[1]Banfield (1982). This is perhaps the significance of Sato's (1990) finding that *think* and *say*

use of quoted speech as an analytic and expressive device is poorly researched, and may prove to be a fruitful area of future investigation.

The cognitively developed adult has a range of discursive and non-verbal skills to rely on, and learners' reliance on such *parallel information* should be emphasised. Learner production operates with remarkable economy to produce large amounts of structure on the basis of minimal explicit expressions, and it may be assumed that comprehension works similarly, as shown by the learners' hypothesising global meaning from their understanding of key words, and the joint learner/TLS procedures for remedying misunderstanding and non-understanding (see below). Slobin points out in the previous chapter that the relative 'simplicity' of communicative tasks needs to be defined in relation to the cognitive capacities of the learner. Unlike young children, adult learners know, for example, that the result of a 'Manipulative activity scene' (Slobin 1985) links through the notion of causative movement to a 'Figure-ground scene'. The ground is goal of the theme's movement, so by expressing the spatial relation at goal, causative movement may be left implicit. Inferences of this type operate in both production and comprehension. On a higher level, the adult relies on information he has about the roles, objectives and sequencing characteristic of particular activity types (Levinson 1979:368). The clearer their structure is, the less misunderstandings arise, and the less need there is for feedback to check mutual understanding. On the other hand, there are subtle differences in discourse organisation which are linguistically and/or culturally determined, and which give even advanced learners an 'accent': we have only been able to allude to these from time to time, and they deserve more thorough linguistic research.[2]

The context of acquisition is discourse activity, in which the successful learner does not remain passive. It was possible to develop a taxonomy of procedures for achieving understanding (Part II:1.2 of this volume). Metalinguistic questions show the learner's awareness of linguistic problems and preparedness to work at them. Successful procedures involve using explicit means of clarification: through metalinguistic questions, reprise and best-guessing - better a bad guess at the interlocutor's meaning than no (overt) guess at all. What emerges is the importance of collaborative meaning-building: the input is not simply a stream of sounds to segment and analyse, and the successful learner strives to reduce the asymmetry of the encounter

provide a lexical entry point into complementation.

[2]For a first attempt for instructions, see Carroll 1990.

and to achieve a level of collaboration where shared knowledge may be overtly established.

Hence, it was necessary, in order to understand how the learner comes to understand, to look at native speaker speech and accommodation: upstream procedures such as scaffolding, and downstream procedures such as correction and the implicit recognition by both parties as to what is to come - what is 'unspoken but solicited and anticipated' (Part II:1.2 of this volume). The *quaestio* from this perspective is fundamentally dialogic (Perdue 1987), and production is influenced by the other's response.

Interactional exchanges of a meta-linguistic nature, where for example a misunderstanding surfaces and becomes the object of négociation, are frequent in all types of data, if hard to systematise. The more explicitly the learner identifies the source of trouble, the more explicit the sequence is. Much work in language acquisition theory, starting from Baker (1979), has gone into establishing whether or not a learner needs negative feedback. Whereas it seems that the learner theoretically does not need any, in practice he gets a lot and scarcely ever uses it. Negative feedback is taken advantage of, along with other sources of information, *only* when it is relevant for the present stage of the learner's variety. The claim of momentary relevance is however more interesting than simply saying that the learner generally ignores negative evidence, as it allows a partial characterisation of a 'critical rule', thus the priority in analysis is, clearly, to retrace longitudinally the path that the learner takes.[3] We return to this in the following section.

Hard work and practice accompany a learner's current hypotheses, not only in metalinguistic questions, but in periods of focus (Part I:4.3 of this volume) manifested by frequency of use and by different types of epilinguistic activity (self-corrections, reformulations, etc.) sometimes called 'trouble'. Future research could more systematically

[3]This idea is already implicit in Braine (1971:170) who notes that 'in the initial stages of learning it may well be that only a small fraction of the input, e.g. single lexical items and short phrases, contributes materially to language acquisition' and points out, therefore, that 'it matters not a whit to the learner whether an utterance he cannot grasp is well formed or not'. In later theoretical work, the relevance of particular input for a particular moment of acquisition, and not others, is largely ignored as the 'logical problem' shunts longitudinal aspects of acquisition over to the 'developmental problem', and intermediate grammars are investigated with the overriding aim of providing empirical support for Universal Grammar. For Baker (1979:533), the solution to the 'projection problem' is 'a body of hypotheses that would make it possible to deduce the full range of adult intuitions in advance, given only a suitable record of the early experience'. As 'early' is vague, his notion of 'primary data' is also almost always vague between the 'initial' and the 'raw' data of linguistic experience.

put into correspondence available accounts of development tendencies and such activity (see Mittner 1987, and Carroll 1992, for first attempts) in order further to characterise the notion of 'critical rule'.

In sum, we have started to chart the interplay of the two 'interactive spaces' of Volume I:1.5.[4] ALA takes place under a double constraint: there is a tension between present communicative need and the present organisation of the learner variety. Learners have to balance what they want to express, and their need to systematise available bits of linguistic knowledge even when this is not strictly necessary for successful communication. We return in 2.4 below to the learners' attempts to systematise knowledge.

2.3 Question II: 'The general structure of second language acquisition with respect to (a) the order in which elements of the language are acquired and (b) the speed and success of the acquisition process'

In discussing acquisition orders in Volume I:4, we surmised that 'the functions [the learner] does learn to express will ... govern the order in which the corresponding linguistic means are developed', and that the linguistic means will vary across languages. However, apart obviously from the word-stock, development to a 'basic variety' proved to be remarkably impermeable to the specifics of SL and TL. Basic varieties were identified in the areas of spatial and temporal reference, and utterance structure. We have also seen that means for feedback and pronominal reference are organised into basic systems. Further development takes the learner varieties towards the specificities of the TLs, but overall, the *structure* of the process shows strong similarities cross-linguistically; what differs more is the *rate* and ultimate *success* of the process.

Development can be characterised as a progressive explicitation of relations. Discourse organisation strategies precede lexical devices which precede grammatical ones. The early (pre-basic) stages leading up to the basic variety are characterised by the pragmatic organisation of words, and are largely noun- based: nouns are put into relation with other nouns - or adjectives, adverbs, verbs, particles - according to the topic/focus organisation of utterances. Referent introduction and reference maintenance are achieved with the minimal opposition of a name or bare noun, and zero anaphor in interaction with the

[4]See also Giacobbe (1992).

topic/focus organisation of utterances, and the main structure/side structure (foreground/background) organisation of text.[5] Many utterances are verbless. Spatial relations between a static theme and relatum are initially expressed by the juxtaposition of nouns denoting these entities and only later supplemented by prepositions. The only clear cases of early structural context dependency are the use of *I/You* and equivalents. Temporal and other relations between these initial utterances are derivable from a knowledge of the overall text type. In narratives for example, the PNO is only later systematically supplemented by anaphoric temporal adverbs.

The passage from these very early stages to the basic variety is characterised by the increasing use of explicit relators: prepositions, articles, and, especially, verbs. The basic variety allows the learner minimally to accomplish some discourse task. It consists of a repertoire organised by a limited number of interacting principles. We have looked at the way phrasal and semantic constraints interact with discourse organisation principles in narratives (Part I:1 and 3), descriptions and instructions (Part I:4 of this volume). In other words, the basic variety is a complex of *interrelations* between lexical expressions, order constraints and the discourse structure of different communicative tasks.

What has still to be acquired? Nothing, for some learners, who stabilise at this stage. For the others, progress beyond the basic variety is characterised by their giving more weight to phrasal constraints. A large part of the answer to this question therefore seems to be: *virtually all the morphology of the TLs.* The most important development is that of the category of finiteness. Our findings support Jordens' (1988) general claim that the distinction between finite and non-finite verbs has to be *acquired.* Use of the finite/non-finite verb distinction provokes a dramatic reorganisation of utterance structure of learners of Dutch and German (Part I:1.5 of this volume). Finiteness precedes person/number agreement marking in all TLs and is a crucial step to the expression of subject-predicate relations. With this step comes the possibility of using non-human subjects and of reverse-oriented verbs (such as 'receive'), and is accompanied by the development of case oppositions. Finiteness also allows a more complex (and flexible) expression of temporal relations.

This overall development is in at least partial contrast with FLA (see

[5]This observation can usefully be compared with Givdn's (1984, cited in Sato 1990) calculation of the 'heaviness' of a referring expression and its distance from its antecedent. This latter measure apparently ignores the inter-clausal structure of discourse, which is precisely what allows the formal poverty of the referring expressions to function.

the previous chapter). Firstly, children give at least some grammatical expression to aspect, anteriority and patient (accusative) relations from very early on, and secondly children are generally assumed[6] to go on to master the morphology of the TL. Non-acquisition in ALA is as important to understand as successful acquisition, a remark to which we return immediately below.

We have abundant evidence for a global grammaticalisation process in part I of this volume, and it is reflected in the development of the lexicon (Volume 1:8.2). As vocabulary gets richer, the proportionate share of verbs becomes greater, and as a parallel development, the morphological differentiation scores of the verb category outstrip those of the other categories. Articles and conjunctions come to have a relatively greater share of the learners' vocabulary in comparable tasks. The evolution of the vocabulary thus reflects the increase in the explicit structuring power of the organisational principles.

We have already described development as a process of gradually marking relational meanings more explicitly: pragmatic strategies are supplemented by lexical items which are then supplemented by morphology. The progressive grammaticalisation of learner varieties we have observed has led some authors of the previous chapters to consider the sequence: *simple to complex.*

The most straightforward example of this tendency is learners' use of a small number of versatile FB words as 'singles' before they formally differentiate FB giving and eliciting functions and incorporate such feedback into more complex utterances, with the concurrent decrease of singles and resultant increase of the mean length of their utterances (MLU, see Volume I:8.1). Recognition of 'transparent' form/meaning relations simplifies the learner's analytic task. For example, the English noun *side,* Dutch *kant,* German *Seite* and French *côté* are taken in early, allowing learners to express the relation NEIGHBOURING unproblematically (Part I:4 of this volume). We return to these forms below.

A more subtle example of what is 'simpler' is given by learners' use of *fixed relata before context-dependent relata* in expressing temporal and spatial relations. This finding needs to be taken into account when returning to the questions and hypotheses of Volume I:4.3 concerning the expressions of spatial and temporal relations. There, we hypothesised that 'deictic expressions precede anaphoric expressions', and we find in fact that up to and including the basic variety: *topological relations precede deictic relations, which precede anaphoric*

But recall that some authors cited in the previous chapter have some reservations.

relations.

For space, entities which can be referred to independently of viewpoint, that is, fixed points, are less complex in that they ignore origo- and discourse-based variables. So the basic system of reference is built on basic topological concepts . Only later are projective relations expressed, and within the projective relations, verticality is expressed first precisely because this axis is less subject to situational variability than the other two. For time, topological relations are also the first to be expressed in that the event/theme is at (or in) the time span of the adverbial acting as relatum. Calendaric adverbials precede context-dependent (deictic) adverbials to localise events. Order (thus, anaphoric) relations are explicitly expressed by adverbials (rather than PNO) only later. On this lexical level, events are explicitly situated deictically before anaphorically.

The grammaticalised categories of tense and aspect for the languages that have both are acquired later, by some learners only. Notice that all learners build up a system for expressing temporality which is fully functional *before* some learners go on to analyse the inflexional categories. The most complex relations are those that involve two relata: spatial 'between', and the projecting of deictic relations from the origo to an entity with no intrinsic orientation and temporal *already, still, yet* in English; *déjà, encore, toujours* in French; *schon, noch, immer* in German. Means for marking these relations are acquired last of all.

The above remarks summarise tendencies rather that fixed rules, as they interact and can come into competition. Thus, although English *side,* and *top /front/back* are semantically equally transparent, the former belongs to the first stage, and the three latter to a subsequent stage of acquisition because 'side' is the more basic concept in the developing system of spatial location.

The use we have made of the notion of 'grammaticalisation' here, is as a possible, although not inevitable, shift in the interaction of principles organising a learner variety where the learner comes to give relatively more weight to phrasal principles, ALA is a halfway house between language change and creolisation, and provides a third possible way of interpreting, out of context, Benveniste's *nihil est in lingua quod non prius fuerit in oratione* (Benveniste 1966:131). In language change, lexical items functioning within an already grammaticalised system get bleached, 'Grammaticalization is a process leading from lexemes to grammatical formatives' (Lehmann 1982:vi) whereas in creolisation, the learner creates phrasal constraints in the absence of input (Sankoff and Laberge 1973). In both these cases, what needs

to be explained is the choice of categories which speakers grammaticalise, and in the latter case, their respective order. In ALA on the other hand, the learner is almost always dealing with grammatical input (as opposed to foreigner talk) and what needs to be explained is both the order of the TL phrasal constraints that *are* acquired, and also why some grammaticalised categories of the TL are *not* acquired: the process is not inevitable. This 'ranking of functions', as we have said, is (or should be, see 2.5 below) of immediate interest to the study of linguistic systems in general.

Fossilisation. Is there no finality in adult language acquisition? We have observed early fossilisation at the basic variety level, and also native-like performance from some learners in some domains (for the tasks that were analysed, in utterance structure and temporality). It is clear that the mere appeal to communicative factors to explain this very great variability will be inadequate.[7] What also needs to be explained is why some types of learners approach the TL as a formal 'problem space' (Karmiloff-Smith 1983) to be worked out, whereas others do not. The latter type of learner perhaps represents what is most strikingly different between FLA and ALA, and highlights the need for further research on learner types, or 'profiles'. We now turn to the explanations we have been able to elaborate.

2.4 Question I: 'The factors on which acquisition depends'

We have discussed four bundles of explanations for acquisition orders and fossilisation: (1) communicative needs; (2) cross-linguistic factors; (3) extrinsic factors and (4) limitations on a learner's appropriation of new material. We will discuss each in turn.

(1) *Communicative needs.* Our analyses indicate that there can be identified a communicative logic in ALA which leads a learner to acquire linguistic means in order minimally to carry out a discourse task, so *communicative needs in discourse* is generally an important factor, and makes a good starting point. It can be described as provoking the setting up of a repertoire organised by a limited number of principles (see section 2.3 above) in order to carry out communicative tasks (how to tell a story, how to give descriptions, instructions, how to argue) then finding linguistic means to overcome (i) cases of conflict between these

[7]See Perdue and Klein (1992) for two detailed case studies.

principles in specifiable discourse contexts (ii) other communicative inadequacies, such as the limitations of the basic system for expressing spatial relations (Part I:4 of this volume). In the previous chapter, Slobin makes a crucial difference between FLA and ALA: adults 'begin with discourse needs that require *sequences* of utterances performing *a range of discourse functions'* (italics his), so:

You won't understand ALA if you don't understand discourse activity.

This claim points to the fact that discourse is a major factor pushing the development of clause organisation, and can be elaborated into the claim that you won't understand crucial aspects of development in syntax, or morphology, or lexicon if you don't understand discourse activity. For example, up to and including the basic variety, discourse constraints govern several aspects of the internal organisation of utterances: the form of NP and article use (see 2.5 below), and the relative order of V and NPs in certain utterance types. In other types, conflict between semantic and topic/focus organisation leads to the development of topicalisation devices. Indications are that adverb and negation placement are partially determined by the topic/focus structure of utterances, and it would be worthwhile to pursue this relatively neglected discourse dimension in future work on scope. Discourse activity also determines the sequential appropriation of sub-categories of pronouns, and of adverbials, and the often timid development of verbal morphology.[8]

In Volume I:4.1 we surmised that 'acquisition is pushed by the communicative tasks of the discourse activities that the learner talces part in', and we are beginning to see exactly how. This is however but one type of determining factor, whose explanatory power is lessened for the acquisitional stages beyond the basic variety, and which interacts with others. We can now go on to evaluate some of these other factors that intervene to constrain acquisition.

(2) *Cross-linguistic influence.* We emphasised in Volume 1:2 how difficult it is to pin down SL influence. It emerges more clearly in cross-linguistic studies as one can keep a conceptual domain constant and vary the languages. The general conclusion is that: *SL influence affects the rate, and success of the process, but*

'See also the summary of Sato (1990) in volume 1:4.3.

tends not to affect the sequence/order.

Features of the input interact in complex ways with both the present organisation of the learner variety, and with the SL expectations of the learner. Analysis of the input is more or less facilitated by source language expectations, and allowance must be made for the immediate influence on the learner of the organisational principles of the TL: where these are highly accessible, as in the cases of semantic transparency given above, then they may be taken in fast, whatever SL/TL relationships.

A first example of how SL expectations influence learner variety use is offered by feedback mechanisms. All the TLs offer similar devices for different types of feedback - repetition, anaphoric linking, idioms. But learner preferences in selecting the devices are a function of SL/TL organisational preferences: 'The target language, so to speak, provides a range of selectables out of which the learner makes a selection' (Part II:2.3 of this volume). Similarly, for order preferences in learner varieties for N - N word formation, learners adopted that TL possibility which most closely corresponded to the SL (Part I:2.4 of this volume).

For a more complex example of cross-linguistic influence, we may return to the 'transparent' spatial terms. Transparent terms are taken in and re-used just so long as they are in the TL input provided (a) that they can fulfil a highly-ranked function and (b) that this function is presently relevant to the learner variety. *Side* and *Seite* are taken in early and used to express NEIGHBOURING, as we saw, although the latter term is not part of the German system of spatial expressions. Moreover, the equally transparent English *top, bottom* are only taken in at a later stage.

As a final example of cross-linguistic influence, we may return to the alternation hypothesis (Jansen *et al.* 1981). We saw in Part I:2 that learners analyse TL input for the within-constituent typological preferences of their SL, and in Part 1:3, that the verb forms used initially by Turkish and Moroccan learners of Dutch, and Punjabi and Italian learners of English, were those which in the TL input corresponded most to SL expectations. It seems then that:

It is in cases of ambivalence, or opacity, in TL organisation that SL influence is strongest.

(3) *Extrinsic factors.* An answer to the puzzle of individual differences in the speed and overall success of ALA has traditionally been sought in possible correspondences between levels of achievement and 'extrinsic' determining factors (see Volume I:2.2): 'propensity' factors such as learners' attitudes and motivations, and 'environmental' factors such as the extent and contexts of language contacts. Such had been the approach (or part of the approach) of the major projects on untutored language acquisition available to us at the beginning of the ESF project. We were not able to improve on this type of finding, although they allowed for more generalisation than we had hypothesised.

Exposure to the TL. In a comparison of the lexical richness scores, it was found that learners in a position to benefit from everyday contacts acquired faster and more successfully. Propensity to benefit from contact could be defined: the learner who is younger, more educated in the source country, not married to a compatriot and with no children is likely to benefit from contact, at least as measured by vocabulary richness scores. On the other hand, TL courses apparently do not help in this respect, particularly, perhaps, where there is a discrepancy between the taught norm and everyday colloquial usage, or where there is too large a discrepancy between the taught norm and the state of one's variety, as was the case for the newly-arrived refugees from Latin America. It appears that one is selectively 'deaf to much pedagogical input (as Pienemann 1985, has convincingly shown). In cases where both classroom and everyday environments were operative (as seen most clearly in the case of the young Turkish learners of German), the everyday environment eventually exerted the determining influence.

It would seem that the factor 'participation in the ESF project' is best seen as a form of pedagogy: participation in the ESF project did not provoke any significant benefit for the richness and diversity of the learner's lexicon, or indeed for the other repertoire measures of the control study (Volume I:8.4). The spontaneous acquisition process seems, from these results, to be beyond the reach of the 'consciousness-raising', pedagogical effect which language pedagogy is said to have (and which project encounters were said by some informants to have): learners are responsive to 'pedagogy' only when it is relevant to the present state of their variety.

To sum up so far, the results (see chapters 1, 3 and 4 of Part I of this volume) are compatible with the idea that the elaboration of a 'basic variety' can best be attributed to the communicative exigencies of the domain, that progress beyond (at a group level) can best be attributed to cross-linguistic facilitation or inhibition, and that progress to the most advanced stages depend on individual factors such as contact and learner orientation.

(4) *Limits on processing.* We said in section 2.1 above that there is a tension between a learner's communicative needs and the need to systematise available bits of linguistic knowledge. For system building (a) you cannot attend to all your communicative needs at once and (b) you have to work new items and rules in (what was termed 'behaviour organisation' in I:4 of this volume). Hence the idea of a rule becoming critical, (a) and (b) imply a distinction between knowledge *about,* languages and *useful knowledge* of a new language. Our approach to ALA has been the study of the building up of the second, (a) and (b) also go a long way to explaining the limited effect of transfer (and its locus) in the early stages of acquisition. Knowledge that languages have subjects, subject-verb agreement, finiteness, expressions involving double relata, is of no *practical* use. Such knowlege (may) become useful much later on. Recall (section 2.3) the massive re-organisation provoked by the acquisition of finiteness: it is hard to interpret Meisel *et aVs* notion of 'know' (1981:115, discussed in Volume I:2.3) in 'The learner 'knows' of course that there must normally be a verb in the sentence and that it carries morphological information'. Certainly, such knowledge is of no practical use initially, and need not be postulated to explain the early stages of development. This is not to equate useful knowledge with 'performance', but rather to take seriously the idea of a *developing* capacity which obeys a double systematicity, a horizontal and vertical systematicity, as we put it in Volume I:1.2. The learner variety - the learner's present internalised system - must be ready to integrate linguistic features of the source or the target.

So what is this useful knowledge? In production, it is a repertoire organised by a limited number of interacting principles whose relative importance varies during the course of the acquisition process. It becomes progressively more tightly organised, making relations between items more explicit. In comprehension, about which we are

less informed, the organising principles may act as search procedures to analyse the spoken input, in conjunction with parallel information.

2.5 Second language acquisition and theoretical linguistics

In general, the attitude of the theoretical linguist towards second language acquisition research resembles that of an enlightened scientist who, on an occasional trip to an underdeveloped country and with the very best intentions, tries to pass on some serious knowledge to the natives. He (or she) feels in a position to tell the acquisition researcher what language is, how it is structured, and how it functions, and this knowledge may help the latter to understand why acquisition proceeds, or should be expected to proceed, in a certain way. He would possibly not deny that the study of developmental processes might be of some interest in itself, although he would surely consider this to be a minor concern; but it would normally not occur to him that this study could be of particular relevance to his own field. Recent publications, such as Ferguson and Huebner (1991) or Eubank (1991), are striking illustrations.

This attitude is not only tolerated but in fact shared by many SL researchers. The reasons are historical: second language acquisition research largely developed from foreign language teaching, and it was, and often still is, perceived as a part of *applied* linguistics - hence as an application of psychological and linguistic and sometimes neurological findings, rather than as a scientific endeavour in its own right. It lacks the glamour of a reputable scientific discipline, and hence some who are active in this field try to borrow this glamour from areas with a higher ranking in the pecking order of scientific disciplines: first from (learning and cognitive) psychology, and more recently from theoretical linguistics. One actually hears second language lecturers telling students: 'Second language acquisition research is a good way of keeping up with developments in linguistics'[9].

This attitude, whilst psychologically understandable, is a serious danger for second language acquisition research. First, and foremost, it imposes a perspective on this research which renders it almost impossible to achieve the aims which it is meant to achieve. Second, it virtually prevents second language acquisition research from making any substantial contribution to a better understanding of how human language is structured, and how it functions. The task of this research

[9]The Leiden summer school 'Tweede-taaJverwerving', June 1991.

is to uncover the regularities which determine the process of second language acquisition. In other words, its aim is a *theory of second language acquisition.* Such a theory does not drop from the sky. If we want to understand how people learn a second language, with varying starting points, under varying conditions, and with varying results, then we simply have to look on how they concretely go about it. This is the procedure we have adopted here. It is the normal procedure of all serious researchers in whatever field, and there is no reason why this should be different for language acquisition. It is logically not impossible, but in actual fact very unlikely that we will ever understand the regularities of this process if we start from the rules which, according to some linguists, some leading linguists, or even the ruling school of linguists, are characteristic of its end-product. We shall illustrate this point by two examples, which take up findings reported in earlier parts of this volume.

The first example concerns the expression of time (see Part I:3). The ability to express what happened when, how long it lasted, and how it is temporally related to other events or states, belongs to the fundamental capacities of any speaker. Accordingly, natural languages provide their speakers with a rich repertoire of expressive means to encode temporality, including

- the inflexional categories tense and aspect
- temporal adverbials of different types
- temporal particles, such as Chinese *le* or *guo*

and others. Linguistic research on temporality is rich, but is totally dominated by studies of the grammatical categories tense and aspect, that is, by temporality to the extent to which it is expressed by verb inflexion. This 'inflexional morphology bias' is faithfully carried over to work on the acquisition of temporality. There are a number of studies on how children and adults learn to express time and temporal relations, but most of them are only concerned with the acquisition of verb inflexion, for example the English *-ing* form, etc. But verb inflexion is but one way to express temporality, and probably not even a particularly important one. To focus on inflexion ignores the interplay between inflexion and the other devices and hence of necessity misses an essential part of the developmental process - the changing balance between these various means. It resembles the attempt to study the laws of planet movement by focusing exclusively on gravity and ignoring inertia. Moreover, the functioning of temporality is always based on a subtle balance between what is made explicit and what is left to parallel information. Again, a substantial part of

the developmental process is the reorganisation of this balance. In chapters 1 and 3 of Part I, we noted that speakers of very early or of late but fossilised learner varieties have no major problems in telling quite complex narratives with a dense web of temporal relations. But these varieties lack any verb inflexion. Hence, an investigation of temporality in language acquisition which takes its main inspiration from the rich linguistic literature on tense and aspect is likely to miss its point: it will not understand how temporality functions in a particular learner variety, nor will it understand the logic of the developmental process.

One might argue here that exaggerating the importance of verb morphology, whilst common in theoretical linguistics, is by no means a necessity. But this is precisely the point - it is the study of *developing* systems which, in practice, puts the role of verb morphology into perspective. The second language acquisition researcher should not wait until the theoretical linguist comes up with the appropriate analysis of temporality in natural language but rather try from his own perspective to make a contribution to this analysis, and the study of developing systems may contribute as much to this aim as the study of the end state.

The second example concerns a particular aspect of syntax - phrase structure and its acquisition. Languages allow for different types of phrases, but this variation is not unlimited: there are general constraints on phrase structure, and it is a basic task of theoretical linguistics to state these general constraints. Many attempts have been made to this effect, and the best-known outcome is X-bar theory. This theory comes in many variants; they all share the basic assumption that for each phase, there is a core element, the head, and the remainder of the phrase is derived from specific properties of this head. Both the type of the head and the type of possible 'projections' of its properties are subject to variation. In order to master a language, a speaker must somehow 'know' its particular X-bar structure. Is this knowledge innate, or is it learned? X-bar structure cannot be fully innate, because it varies to some extent. On the other hand, deriving it from apparently insufficient input data seems an almost hopeless enterprise for the learner. One might assume, therefore, that some aspects of it are innate, and all that has to be learned is the particular way in which the general constraints are spelled out in the particular language (for example by selecting one of the two possible orders between head and complement).

This way to state the acquisitional problem is common among theoretical linguists, and it is surely not illogical in itself. But for the

second language acquisition researcher, it has the disadvantage of putting him or her at least temporarily on standby, so to speak, until theoretical linguists agree what the relevant constraints on phrase structure are and how they are parameterised. Imagine now that, in order to pass the time, he or she simply has a look at what learners really *do* when learning, say, N-bar structure. The curious researcher will soon discover that they do not learn N-bar structure at all. Instead, they learn to refer to persons or objects. When faced with a German-speaking environment, they discover, for example, that, when they want to speak about a girl, they must utter the sound sequence *Mädchen.* Somewhat later, they discover that, when a specific girl is at issue in the particular context, they would have to precede *Mädchen* by the morpheme *das,* whereas otherwise, they have to precede it by *ein.* Similarly, they discover that there are other ways to refer to that same entity, for example by uttering the sound sequence *sie,* or under different conditions (for example when that entity was referred to in the immediately preceding sentence in similar grammatical function) by leaving the referent implicit.

Obviously, the details of this process are not as simple, and Part 1:1 of this volume gave some indications on how it works in reality (a more detailed analysis is found in Klein and Perdue 1992). We shall not try to follow it up here. The general point, however, is this: the question of how speakers are able to 'know' X-bar structure, is just an odd way to pose the problem - odd because it turns an interesting empirical problem into something like a deep puzzle. Speakers do not learn - for example - N-bar structure. They learn to refer with varying means under varying conditions, and *the result of this acquisitional process is what, theoretical linguists like to call N-bar structure.* There is no mystery here, but there are a number of fascinating empirical problems, which the serious acquisition researcher has to solve, and can solve.

2.6 The learners did the work

The initial assumptions of this study (Volume I:1.2) are that:

> '- the internal organisation of an interlanguage (or *learner variety* as we shall say) at a given time is essentially systematic, and
> - the transition from one variety to the next over time is essentially systematic.'

The results of Volume II should have illustrated the nature of this double systematicity in some detail, ALA is then a robust, and in many ways an autonomous process, involving the re-creation under real-time conditions of a system of linguistic communication with its own regularities and which is, so far as the results of the correlational studies (Volume 1:8) are valid, at least to a certain extent impermeable to pedagogical intervention.[10]

The process is slow and success is variable, but in order to understand it, the focus must be on the *process* (not merely on its initial and end state), and therefore on the *learner.* It would be easy to add many more examples from the chapters of this volume to section 2.5 above. But the general point of the argument should be clear. Language acquisition, first and second, is a complex and fascinating phenomenon, worth studying in its own right. The serious researcher should carefully explore *the full range of this process,* isolate the various causal factors which determine it, characterise the way in which these factors interact in varying combinations of source and target languages, and finally develop a theory which explains it. In doing so, he or she should have a look at what serious researchers in neighbouring fields think and claim about language and human cognition, without taking their views for granted - either in what they say about their own field, or even less in what they presume to say about language acquisition. Only then will language acquisition research - and ALA research in particular - achieve what it is supposed to do, and is able to do, namely, to make a substantial contribution to a deeper understanding of language, and of human cognition in general.

hoc scripsimus MCMXCII

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[10]There are implications here for classroom learning - hence for teacher training - which would need to be worked out, and we repeat the invitation of the Preface to Volume I for authors of language training programmes to avail themselves of ESF data and results.

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