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'Is Learning a Second Language like Learning a First Language All Over Again?'

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It is a pleasure and a privilege for me to be asked to be a keynote speaker at this first Congress of the Applied Linguistics Association of Australia. I consider the creation of this Association to be an event of major importance, and I am delighted to be in at the start. But privileges, of course, entail responsibilities; and I recognise that being a keynote speaker carries certain special kinds of responsibility of its own.

In planning this address I was reminded of an occasion some years ago when I sent to the B.B.C. a script for a talk which I was proposing to give on the Third Programme. My script was rejected, and with it came a little note from the producer which said that the responsibility of the Third Programme was to stimulate, not to inform.

Clearly I had committed the major sin of trying to tell people things. With this lesson in mind I ought perhaps to assume that the responsibility of a keynote speaker is likewise to stimulate and not to inform. In which case, it may be rather rash to offer a title which asks a question, since questions demand to be answered. However, the question it asks is one which seems to me is bound to be raised in a great many of the deliberations that take place in meetings of a group such as this: namely the perennial question of the similarities and dissimilarities between first and second language learning.

In one sense, of course, the question is very simple to answer. If it is put like that, "Is learning a second language like learning a first language all over again?", the answer is obviously 'no' — if only in the sense that everybody learns a first language, whereas by no means everybody learns a second language, and those who do, have learnt a first one first. However, we should not be asking the question if there was not a great deal more to it than that. *The issue is a real one, as can be gathered from a reading of the papers on language learning psychology presented at the Second International Congress of Applied Linguistics in Cambridge in 1969, brought together in the volume edited by Pimsleur and Quinn.* Over the past few years, many writers in the applied linguistics field have stressed the similarities between first and second language learning rather than the differences. Pit Corder, for example, envisages the adult language learner having a built-in strategy or 'syllabus' for language learning, which he is inclined to regard as being essentially the same as that of a child.

The notion that the two are essentially alike is by no means new. David Reibel, in a paper on adult language learning, refers to this point having been made already by Henry Sweet in 1899, in his book *The Practical Study of Languages*, and by Otto Jespersen in 1904, both these linguists stressing the similarities between second language learning and first language learning; and again in 1922 by Harold Palmer, advocating the aural/oral method of teaching languages, and relating this to the learning of the mother tongue. Traditional language teaching *practice*, of course, as enshrined in the 'grammar-translation method', ran directly counter to this view; ~~this was~~ one of the reasons why many linguists objected to the practice and ~~tried to~~

change it. Theoretical justification for treating the two as different came mainly from the direction of psychology, though some linguists have attempted to capture the difference by referring it to a particular model of language, an example being McNeill's suggestion, made in 1965, that whereas the child learning a first language tends to proceed from deep structure to surface structure, the adult language learner tends to proceed from surface structure to deep structure.

In work published during the past ten years various findings have been put forward as evidence of similarity between first and second language learning. One type of evidence that is widely cited is that which is drawn from the study of language errors. In the earlier discussions it was usually assumed that, if there was any general principle underlying both mother tongue errors and foreign language errors, this was simply the use of analogy, and nothing more specific than that. More recently however it has been maintained that many second language errors are actually the same as the errors made by mother tongue learners. This is in part a reaction against the view which lay behind the main efforts in language teaching of the fifties and sixties, which is implicit in the approach through contrastive analysis, that foreign language errors were to be explained, and could in principle be predicted, by reference to interference from the mother tongue. In the collected papers by Gerhard Nickel from the Third International Congress of Applied Linguistics, held in Copenhagen in 1972, the discussion of contrastive analysis centres largely around this point; one could gather the impression that the unique function of contrastive analysis is to predict the errors that foreign language students are going to make. I am not sure that it does this very well, though I do think there are other good reasons for undertaking it.

I doubt whether anyone ever thought that *all* second language errors were the result of mother tongue interference. Most people would probably accept the sort of perspective given by Ravem, in a paper cited as evidence by Susan Ervin-Tripp. Ravem observed his 6-year-old Norwegian-speaking son learn English in Scotland, and found that in using the English verb the little boy regularly made mistakes in negatives and in interrogatives. The errors that he made in the interrogative were typical interference errors; his interrogatives were like those of Norwegian and not like those of English mother tongue learners — for instance, he said 'Like you ice cream?' and 'Drive you car yesterday?' His negatives on the other hand were like those of some English mother tongue learners, and quite unlike anything found in Norwegian outside certain special contexts; for example — 'I not like that.' 'I not sitting on my chair.'

Here within the same grammatical system there were two very clearly differentiated types of error, one that could be explained as interference from the mother tongue, the other that could not. An example of a general statement of the position is the observation made by Lance, in his study of Spanish speakers learning English, that 'From one third to two thirds of the deviant features of the foreign students' speech could not be traced to identifiable features of Spanish'. Here again the role of interference is played down.

Susan Ervin-Tripp, who quotes Lance, tends to emphasise the similarities, and it is interesting that in her own work she started off as a specialist in first language learning, studying her own and other children in some depth; the

family then happened to go and live in Geneva for a while, and she began to study the way in which her own children were learning French. It soon struck her how similar some of the learning processes seemed to be. She reports her finding that 'In this respect first language and second language learning must be quite alike'; and if we look to see what this refers to, we read that 'The learner actively reorganises, makes generalizations and simplifies.' Her context for saying this is the assertion that learning is an active process. The child 'actively reorganises' the language he is exposed to. In other words she is not really claiming much more than in both first and second language learning there is what she calls 'selective processing' by the learner: 'One way of looking at second language learning is to assume that the first encounters with a second language will be handled by the apparatus of structure and process already available.' By 'already available' she means apparatus that has already been brought to bear in the process of learning the first language.

The most clearcut cases of similarity would be those of the current learning of two languages by bilingual children, true 'co-ordinate bilingualism', in the terms of Ervin-Tripp and Osgood, where a child is learning of two languages by bilingual children, true 'co-ordinate language is learnt some time later than the first, it may still be the case that, in Susan Ervin-Tripp's words, "some prior processes and structures will be employed", but we may expect to find rather greater differences. But if we are looking for the more dramatic differences in learning conditions, these will be determined not so much by whether the language being learnt is first or second, as by whether the learning is natural or induced. Is it natural language learning or is it classroom language learning? Once the second language learning becomes induced as opposed to natural — once it becomes applied linguistics — then the similarities with first language learning may tend to evaporate.

We have to remind ourselves, of course, that first language learning is also partly induced. I am not talking about what may happen in a home, with anxious parents, but about what happens when the child comes into educational process, and particularly when he starts to become literate. Presumably we shall find that there are similarities between induced second language learning and those aspects of first language learning which are also in some sense institutionalized, in particular learning to read and write. Kenneth Goodman, discussing misconceptions that are current in the teaching of literacy, refers to the misconception that meaning may only be derived from spoken language and therefore that reading involves recoding graphic input as phonic input before it is decoded. This, he says, may be done by some learners in the early stages of learning to read and write, but that is all. He goes on: 'An analogy can be found in the early stages of learning a second language. The learner may be going through a process of continuous translation into his first language before he decodes, but eventually he must be able to derive meaning directly from the second language with no recourse to the first.' In learning to read and write, the goal is to derive meaning directly from the written text without translating it into the spoken medium; and since spoken and written language differ very sharply in their functions and their relation to the context, reading and listening will employ variant psycholinguistic strategies to cope with the variant

characteristics of the two forms. When we come to first language and second language, we will not find them differing in their relation to the context in the sense that reading and writing do; but we will find them differing in their functions, particularly in cases of so-called co-ordinate bilingualism.

Bringing up the question of learning to read and write reminds us of the comment by the primary school teacher who remarked 'It's lucky we're not responsible for teaching them to *talk*. If we were they'd never learn that either.' Nevertheless a surprising number of people do become literate, mostly through being taught; and in the same way perhaps, a surprising number of people do succeed in learning second languages. Some people would say that, given that we are in some form of classroom situation, this success is achieved to the extent that we can minimize the difference between the two conditions, to the extent that we can make the process of induced language learning resemble that of natural language learning.

If we look through the applied linguistics literature we find models of second language learning which clearly do not make this assumption. A well-known example is Carroll's learning model of 1963, in which mastery of a task is seen as a function of five factors, two of them being instructional factors, (i) presentation of material, text, teacher and so on and (ii) time allowed for learning, the other three being student factors, (iii) general intelligence, glossed as ability to follow instructions, (iv) motivation, or degree of perseverance, and (v) aptitude, the time needed for learning. This calls to mind a comment made some years later by Peter Strevens, that after all his experience in applied linguistics and language teaching he was inclined to the conclusion that the only significant variable in the whole process was the time of exposure, the time the student actually spent on the task. Another model of this kind is Larry Selinker's, stating the five processes which establish the knowledge that underlies inter-language behaviour, namely language transfer, transfer of training, strategies of communication, and overgeneralization of linguistic material (which means analogy). So there is no lack of interpretations of the language learning process which are based on the assumption that it will not be naturalised, but will remain very much a consciously induced process.

But there is also a long history of what we might call naturalistic theories of second language learning and teaching, theories concerned with the attempt to simulate conditions of first language learning in the organisation and teaching of the second language. These go back at least to François Gouin, one of the pioneers of language teaching theory in the 19th century. Gouin had studied German in Paris for eight years. He then went to Berlin to study, and was distressed to find that not only could he not follow a word of what was said in the lectures but he couldn't even order himself a cup of coffee. (Failure is not a new phenomenon.)

So Gouin became interested in the problems of second language learning and teaching, and wrote a very interesting book in which he put forward certain ideas attempting to simulate in the second language situation that aspect of first language learning in which the child is organising, categorising and interpreting reality. Gouin indeed expressed the hope that, if adequate materials were devised for representing in the target language all those events, processes, qualities, objects and so on of daily life that language served to encode, the teaching programme and the materials could 'exhaust

the phenomena of the objective world.' A noble aim, and one that is implicitly shared by many language teachers today, although in general, I shall suggest, we have moved forward from that position.

Materials deriving from Gouin have appeared at various times and places; I was in fact taught Chinese with materials of this kind, devised by Walter Simon and C.H. Lu. Each lesson described in great detail all the small processes that take place when for example you take one step forward, or open a door. It took thirty sentences to complete the process of going out of a building. 'I rise from my chair. I walk towards the door. I reach (arrive in front of) the door. I stretch out my right hand. I grasp the handle (with my hand)', and so on.

Gouin's ideas had a strong influence on the development of the direct method, which was the modern way in which teachers were trained to teach languages in England in the 1910's. No written materials were to be used and no word or morpheme uttered in the mother tongue. The direct method was a conscious attempt to stimulate natural conditions of language learning.

Among more recent developments along these lines, the one I find most interesting is the approach we might call 'listen-but-keep-quiet'.

Sorensen refers to an area of the Upper Amazon, on the borders of Colombia and Brazil, where a number of tribes are in regular contact and every adult typically speaks three or four distinct languages. The members are aware of the pattern use and of the conditions that enable them to become plurilingual, although no explicit language instruction is given. It appears from his account that they learn by listening. In most cases it is only after they reach adolescence that they have the opportunity to hear the languages they need to learn; but when the time comes they are able to listen in to a large amount of speech without being required to participate in the conversation. The success rate appears to be remarkably high. I have the impression of having read somewhere of a community in which the process is even more orderly, where the young men of marriageable age go and sit outside the entrance to the village which is the home of their future wives. The language is quite different from their own; but after a few months of listening to the passers-by, they can not only understand it but also speak it with a fair degree of competence. Unfortunately I have not been able to trace the reference to this, though I believe it to be authentic.

There is an unfortunate legacy from the ideas of the previous decade, one that derives from transformational theory in linguistics, according to which after the maturational threshold that is reached about the ages of 9 to 11 it becomes impossible to learn a second language with native-born competence. This I think is quite untrue. It may become more difficult, but it does not become impossible. There are many parts of the world where it is quite normal for adults to learn a second and even a third and a fourth language and to achieve native-like competence in the process.

How widespread the use of the 'listen-but-keep-quiet' technique is in these informal language-learning situations I do not know. But it has been proposed as a method in language teaching. To quote from a paper on this topic by Annie Mear: "The acquisition of a receptive repertoire prior to the introduction of the productive component of the language would constitute a most powerful advantage for the acquisition of adequate expressive

behaviour” — which means if you want to learn to talk, first listen. This idea has been built into certain language teaching programmes.

The simplest form that it takes is the use of Skinnerian concept of mands: giving instructions which the learner can carry out without having to verbalise any response. He is required to move around, to hand objects across, to point out certain things, to put on and take off clothing, and so forth, without saying anything himself. There is a variety of instructions that the teacher can give which demand no verbal expression on the part of the learner.

Nevertheless their range is very limited, and it is clear that if we are going to restrict our language teaching material to items of this kind we shall not get very far in simulating the functions of the first language. Clearly something with much more content is needed, if the programme is to be anything like a real-life language-learning situation. In fact, programmes of this kind have been devised; an example is that developed by Harris Winitz and James Reeds at the University of Missouri, Kansas City, which includes materials for teaching German, Japanese and Hebrew along these lines. These materials are not limited to imperatives, or ‘mands’ of any kind; they include both narrative and dialogue, and various techniques are being explored for presenting language in different functions in such a way that the learner is not required to perform at all for some considerable time. Active participation by the student can be introduced at different times and in a number of different ways. As in all foreign language learning, there are no simple measures of success; I know no way of evaluating the results in terms that are quantifiable and still significant. But the approach is an extremely interesting one, and it is based on the proposition that, if we take seriously the notion that learning a second language is or ought to be in some respects like learning the first language, then we should take note of what actually goes on when one learns one’s first language, one important characteristic of which is that the infant from birth onwards can be there and listen without having to produce responses. A baby never has to do what the unfortunate student in the language class has to do, namely spend all his time and mental energy thinking about what he’s going to say next, thereby being prevented from ever really listening to what others are saying now.

This emphasis on listening is one of two developments in the last ten years that I find particularly interesting. The other one is something very different, and that is the move towards teaching languages for special purposes (see the C.I.L.T. Conference report under that title edited by George Perren). This practice is derived from register theory, from the notion that all use of language, including the mother tongue, is to be explained by reference to the contexts in which language functions (see Halliday, 1973; Ellis and Ure; and Ure and Ellis). Language is essentially a variable system, and one aspect of its variability is that different areas of ‘meaning potential’ are typically associated with different types of social context; hence the context will tend to determine which semantic systems are more readily ‘accessed’ by a speaker and listener. But this is another topic, which I shall not have time to go into here.

Obviously the central problem for an approach to second language learning based on first language learning, in which one is attempting to simulate natural processes, is that one has to have a clear idea of what

learning the first language is like. This may not be easy, because there have been shifting patterns in the interpretation of the learning of the mother tongue, with many changes of emphasis over the last 25 years. If one goes back a quarter of a century or so the main emphasis amongst those who were studying the way a child learns his first language was on phonology and morphology, which are the most obvious aspects of the linguistic system: how does a child learn speech sounds? how does a child learn word construction? By the end of the 1950’s the attention had begun to shift away from phonology and morphology on to syntax. Since then we have been through various stages in quick succession; Maris Rodgon, in her recent book on one-word sentences, talks about the syntactic, the semantic, the cognitive and the communicative explanations of language acquisition. During the 1960’s, which have been labelled the syntactic age, the learning of the mother tongue did tend to be interpreted, mainly under the influence of Chomskyan theory, as the acquisition of syntax; and here we should note not only the word *syntax* but also the word *acquisition*. The prevailing metaphor for talking about the learning of the mother tongue in the 1960’s was the metaphor of ‘acquisition’, suggesting that language is some type of commodity that the child has to acquire. One shouldn’t make too much of such metaphors; but it is noticeable how much of the work of this period is affected by the notion that language exists independently of people speaking and understanding; that there is an object called a set of rules which constitutes adult language, and it is the task of the child to acquire this ready-made object.

By the end of the decade linguists were moving away from this view and beginning to pay attention to the learning of meanings, proposing semantic rather than syntactic models of first language learning. The syntactic age was giving way to a semantic age. In fact however there has never been a semantic age, at least in the field of child language studies, because at the same time as shifting the emphasis from syntax to semantics those concerned with interpreting first language learning, or language development as it is now more appropriately called, were trying to look even beyond semantics into whatever it was that the semantics was being seen as the encoding of. The reasoning was that, if a child is learning to mean, this is not because meaning is an activity in and of itself. It is because meaning is a mode of action which has some further context from which it derives its value and significance. There are essentially two directions in which one can look beyond the meaning system: the cognitive, and the social. (I would call it ‘social’ rather than ‘communicative’.) We can consider a child learning to mean against the background of his development of a cognitive system, as part of learning to think; or we can consider it against the background of his social development as part of learning to interact. The former implies some theory of individual learning and cognitive development; the latter implies some theory of social learning — of socialization and the social construction of reality.

Many of the basic ideas in developmental psycholinguistics have been derived from the work of Piaget, although since Piaget sees all linguistic processes as secondary it is not easy to interpret his thinking in linguistic terms. Hermine Sinclair has developed some of Piaget’s ideas in explicit linguistic form, so that one can evaluate them in relation to what actually

happens when children learn language. The basic notions are familiar; we can cite just one example. Piaget at one point postulated four stages in cognitive development, the sensory-motor stage, the pre-operational stage, the stage of concrete operations and the stage of formal operations; and he claims that the learning of language, and hence the learning of meaning, is constrained by the stage of cognitive development that the child has reached. One standard example of a concept belonging to the stage of concrete operations is that of conservation, the conservation of a liquid or plastic substance under transformations of shape. If a child can interpret what happens when he pours a quantity of liquid from a container of one shape into a container of another shape, as he does in his mathematics class, he must have a certain conceptual framework involving serial ordering (bigger than, longer than, etc.) and recognition of contrasting properties (short but fat, etc.)

These are concepts deriving from the stage of concrete operations which Piaget associates typically with the age range 7 to 11, although his age assessments tend to be a bit late because they are based on experimental rather than natural behaviour. Inhelder and Sinclair have shown that children who have acquired the concepts of conservation and seriation can do three things with language which children who have not acquired these concepts cannot do. (1) They can use comparative forms correctly: 'One thing has or is more than another'. (2) They can express differentiated properties in co-ordinated descriptions: not just 'this is large', but 'this is long and this is fat'. (3) They can express contrasting notions like 'this one has less in it but it is bigger'. Inhelder and Sinclair say that children who have not yet reached the stage of mastering the concepts of conservation and seriation will not naturally control these semantic systems. They then go on to ask whether these semantic patterns are teachable, whether children who are not yet conservers and serializers can be made to learn them; and they come out with three different answers. They say that children who have not got to this stage can readily be taught differentiated terms, like separating out the concept of 'big' into its component concepts of 'long', 'fat' and so forth; that they can less easily be taught to use comparatives; and that it is practically impossible to teach them the use of co-ordinated and contrastive descriptions.

Now I must comment on this as a linguist. Part of the problem is that what children do linguistically under experimental conditions is very little guide to what they are doing naturally, and it is necessary to back up the vast amount of experimental psycholinguistic studies of children's language with a substantial number of language diaries of individual children. Intensive observation of this kind gives an insight into the total meaning potential that the child has in real-life situations at a certain age. And this may be very different from anything that can be brought out under experimental conditions.

Another aspect of the problem is that experiments based on categories of cognitive development fail to take account of the semantic *system*, and so do not place the particular items under investigation in their significant context, which is the totality of what the child can mean. Maris Rodgon has been studying the development of certain particular semantic patterns, namely possession, location and transitivity; she comments that she finds no clear

cognitive or sensory-motor correlates to these. She also says, referring to the earlier stage, that Hermine Sinclair's claim that completion of sensory-motor development is necessary for the development of representational intelligence in the form of combinatorial speech — that is, for the development of certain syntactic and semantic structures — it is not supported by her own findings, although not clearly refuted either.

So one major thrust of language development research, with which one of those particularly associated was Lois Bloom, has been towards an interpretation in terms of some theory of cognitive development. The most comprehensive and elaborated ideas in this field were those of Piaget; but not everyone is committed to a Piagetian philosophy, and recent work by Colwyn Trevarthen is providing an alternative framework which seems in many respects to allow a more satisfactory interpretation of how a child learns how to mean.

The other direction in which these studies have been moving is towards and interpretation in social or 'communicative' terms. Here one is looking at the development of the semantic system not as an aspect of cognitive development but rather as an aspect of social development or socialization. One step in this direction that was taken within the acquisition model was to describe language development as the acquisition of communicative competence. I am inclined to see this notion of communicative competence as a rather misguided attempt to rescue the Chomskyan notion of competence, by applying it in an area to which it is in fact quite inappropriate. This view will certainly be disputed. But the difficulty with communicative competence as a model of language acquisition is that it does tend to degenerate into a sort of 'good manners' view of language learning, interpreting it as learning how to behave linguistically in social situations; it is noticeable how often the examples used are of the acquisition of socially appropriate language behaviour, such as forms of greeting and leavetaking. There is no need, of course, to limit the notion in this way.

A more recent step has been the attempt to apply the notion of speech acts, now widely used in linguistics. John Dore has suggested interpreting language development as the acquisition of speech acts. We might characterise speech act theory as a belated attempt on the part of philosophers of language to take account of the fact that people talk to each other. This is an important discovery; but the theory presents certain problems. One is that it is somewhat static in its conception of the speech process, not leaving much room for the dynamic unfolding of dialogue. The other is that it tends to operate with logical concepts rather than with semantic ones. It would I think be likely to throw more light on language development if its basic concepts were derived from the semantic system that underlies the process of dialogue, starting from the meanings that are actually coded in the language rather than presuppositions about the hearer's state of mind.

Still in this same general direction is the interpretation of language development in terms of the concept of socialization.

Here the leading figure is Bernstein, whose theoretical ideas have been translated into linguistic terms by Geoffrey Turner and applied to the study of the meaning potential developed by children of early school years in certain 'critical socializing contexts'. Again the socialization model embodies

a metaphor, that of a child 'being socialized', which could lead one to think that there is something ready made 'out there', that the child has to be made to conform to. It is important I think to look at the socialization process not as one of moulding the child to some pre-existing scheme of things but as a process of intersubjective development in which the child is actively involved together with the 'significant others' in creating both a language and the social reality behind it.

Common to all these approaches is a renewal of interest in the functions of language, in the part played by language in the life of the speaker and the demands which he constantly makes on it. We cannot really hope to interpret the learning of the mother tongue except by asking what the child is learning language for, what he is doing with it, and what the underlying functions are from which he derives his own acts of meaning and his understanding of the meanings of others.

Katherine Nelson in some recent work suggests that very young children in the first stages of language learning tend to be differentially oriented towards different types of linguistic function. She finds two functional groups which she calls the referential children and the expressive children. The group which she calls referential tends to be oriented towards interpreting and classifying the real world. These are the children who are interested primarily in language as a means of categorising reality and imposing pattern on their experience. The second group, which she calls the expressive, are those who are oriented towards the interpersonal functions of language, language as a means of interaction between people. One of the questions that interests her is whether there are any social correlates to these two groups.

Functional semantic interpretations of child language, among which I would include my own study *Learning How to Mean*, make it possible to identify acts of meaning long before a child has any recognisable syntax, before even the appearance of the one-word sentence. In the syntactic age one typically measured the stage which the child had reached by reference to the mean length of utterance (M.L.U.), counting words or, in a sophisticated version, counting morphemes. Behind this lay various assumptions: first of all that there are such things as words and morphemes in children's language at this stage, which is quite problematic; secondly that one can identify them, which is even more problematic; and thirdly that the number of such items in an utterance is a significant measure of something other than itself. This is not to deny, of course, that a great deal of important work was done along these lines; the profound insights displayed in Roger Brown's work show the positive value of a lexico-grammatical approach and of a conception of syntactic complexity. But concentration on the length of utterance led to the assumption that language development began only at the point when the M.L.U. was greater than one; in other words that language learning begins with structure, when the child produces a sentence — a sentence being something with (at least) two elements in it.

But it is impossible to ignore the fact that there is a great deal of meaning in a one-word sentence. Whether one claims that there is also structure is likely to depend on whether one subscribes to the syntacticist notion that structure is necessary to meaning. An interesting structural interpretation of the one-word sentence is that by Greenfield and Smith. Maris Rodgon,

whom I mentioned before, is also mainly concerned to offer interpretations of one-word sentences; but her approach is in functional-semantic terms.

The one-word sentence, or 'holophrase' (to give it its technical name), is a regular feature of infant speech from around 16 months — though I would comment in passing that it is a mistake to attach too much importance to it, since its developmental status is very variable: some children like to stay in the one-word stage for a very long time, whereas others skip through it in a couple of weeks. Not every one-word utterance is a holophrase; Maris Rodgon recognises three different categories: (1) repetition, where the one word is an attempt to imitate adult speech; (2) naming, where the one word is an attempt to label some phenomenon of the real world; and (3) the holophrase, which she defines as 'the use of a single word to convey meaning that is typically expressed in an adult by more than one-word structure'. Among the one-word sentences of the children she was studying she finds instances of all three; and she attempts to relate these to Katherine Nelson's ideas about children's orientation towards different functions.

Once we move out beyond purely linguistic interpretations, we can conceive of theories of language development not only in terms of syntax or even semantics but also in terms of the cognitive and social processes that in some sense lie behind the semantic system. This is the direction in which we have to look if we are taking seriously the question of the extent to which second language learning resembles first language learning. In this way first and second language learning may be more readily relatable not merely to each other but also to learning theory in general. In what senses is language learning like, or unlike, learning of other kinds; and what does it mean to say that language learning is a problem-solving activity, or that language learning is information processing, or that language learning involves a number of language-processing strategies? What do these concepts (strategies, problem solving, information processing — all of which have been used to characterise language learning) mean in terms of a general learning theory by reference to which language learning is being explained?

Also in relation to learning theory, how are learning processes related to the use and understanding of language?

In particular, when does hearing become learning? What implications do we derive from our interpretation of the processes of reception and decoding of language? In Kenneth Goodman's formulation, 'the efficient language user takes the most direct route and touches the fewest bases necessary to get to his goal'; and he does this by sampling, by predicting, by testing and confirming. If these are processes involved in hearing, in the decoding of language, what is their relation to the learning strategies that we say are involved?

We must be prepared, I think to admit anecdotal evidence in applied linguistics, as in many other respectable fields of activity. There are very many facts relevant to language learning that have not yet been codified and written up in academic papers. One example that sticks in my mind is from that delightful book by Gerald Durrell, *My Family and Other Animals*.

Gerald Durrell grew up in England until he was ten years old, when his mother, looking out of the window one morning and seeing that it was raining, said to her four children 'Let's go and live in Corfu'. So they went, knowing no Greek at all; and Gerald Durrell describes how he used to lean

over the wall of the house where they were living and listen to the people talking to each other in the fields. One morning he went to lean on the wall as usual, and discovered that he knew Greek. This is what I would call the 'click' phenomenon.

We need to understand this phenomenon and bring together different kinds of evidence that have a bearing on the experience. It has happened to me only once; but the way in which it happened is interesting because I had not had the advantage of learning a second language under natural conditions. I had been taught Chinese for military service, starting at the age of 17, and when the war finished I went to China to study. One day after a few months in Peking I suddenly realised that I knew Mandarin phonology. As far as the speech sounds were concerned, I was now the equivalent of a native speaker. I had got a native-like command of the phonology of that form of Chinese. Not that I was never going to make any mistakes; but from then on they would be native-like mistakes, slips of the tongue.

I had a clear sensation that something had clicked. But unlike Gerald Durrell, for whom the whole system had clicked, with me it was only the phonology; and that is as far as it ever got. I was living and working quite competently in Chinese, listening to lectures, writing essays in Chinese and so on; but the rest of the language never clicked. I never became a native speaker in the lexico-grammar, still less in the semantics; and I never shall. I count myself lucky to have experienced this phenomenon once, even in that partial sense. But this may well be a difference between the adult and the child. I am not altogether surprised that with me, as an adult, this phenomenon was specific to one particular component of the linguistic system, namely the speech sounds, and that it did not go beyond there. With a child, perhaps, it happens all at once.

One psychologist who has done some most interesting work in the field of language processing is Ruth Day. She has found a bi-modal distribution, another way of dividing the human race into two classes, along the lines of what she calls the 'language-bound' and the 'stimulus-bound'. What this means is that there are essentially two different ways of listening; and in her experiments almost every subject belongs clearly to one type or the other. Some of us are 'language-bound', which means that when we hear language we only listen to the meaning. We do not shift our attention up and down the system, switching it on to the wording, the grammar and vocabulary, or on to the sound, the phonology and phonetics. Others of us are 'stimulus-bound', which means that when we are listening our attention wanders all the way up and down the system; we may switch off the semantics and start attending to the grammar or the phonology. Ruth Day has done some nice experiments which bring this out. For example, she gives her subjects the task of transposing sounds, substituting [l] for [r] and [r] for [l], so that given the word *bramble* they are required to respond with [blæmbr] (i.e. an imaginary word *blamber*, as it would be pronounced in American English). For one group the task is so simple and obvious that they can't see what the problem is; they just do it. The other group not only cannot do it; they often cannot understand what it is they are being asked to do. The latter group are the language-bound; they are so taken up with the content of language that they find it difficult to tune in to anything else. The former are the stimulus-

bound; they can tune in to any aspect of the coding, but are likely to be correspondingly less rigorous in their commitment to the content.

The labels are misleading; the phenomenon is one of orientation rather than bondage, and the two might be better named 'content-oriented' and 'code-oriented'. But from her findings there do appear to be these clearly differentiated groups; and if this is so, then we would expect to find somewhat different strategies among language learners, including (if the difference appears early enough) among young children learning the mother tongue, according to which of these two groups they belong to.

In my own recent work on the learning of the first language I have been paying particular attention to what goes on *before* the learning of the mother tongue. The notion that one need not start listening to what goes on until the child is using words that one can recognise as those of English, or whatever the mother tongue is, is simply not valid. We have to recognise that behind a child's first use of words at the age of, say, 14 to 18 months is a long period of language development, and that in many instances before beginning to use the mother tongue the child has created for himself, in interaction with those around him, some kind of proto-language, a linguistic system through which he can exchange meanings with his mother and probably a small group of significant others, constituting his 'meaning group', and which has a functional semantic system of its own, something that is not derived from, although it will be ongoingly modified by, the semantic system of the mother tongue. Even within this general pattern, of course, we will find tremendous differences among individual children as regards the strategies they adopt — and again, common to all of them will be certain universals of human development. Fashions change; there are times at which one is looking more for universals, there are times at which one is looking for cultural or other systematic variations. We have to try to keep our focus on both. It is just this issue which arises in the second language learning situation; if we have a group of thirty students in front of us we are faced with different learning styles. Those designing materials usually assume that, because we cannot accommodate all the individual variation, we have to treat all learners as alike. But there are probably a small number of very general learning styles, in part at least relatable to social factors in the broadest sense; and it seems reasonable to suggest that our language teaching effort should try to get to grips with these.

If we are interested in the relation between the natural condition of language learning and that which I have called 'induced', which involves learning a second language under some sort of institutional conditions, then a difference must be made here between the means and the goal. The means cannot be those of natural language learning, in the sense that whatever we do to approximate to the natural, it will always be contrived. That does not imply that it's not a good thing to do, but that we are deceiving ourselves if we think that the avenue of approach to the second language in the induced situation can ever be the same as the avenue of approach to the first language.

But while saying that we should not lose sight of the equally important fact that the goals are essentially alike. The goal of the language learner, whether of first language or second language, will always be a goal of the same kind; the difference is a matter of degree. In other words, what we are aiming for in

a second language situation is the same kind of thing as we were aiming for in our first language situation, namely success. But success will always be a relative matter; in a second language we may be aiming for success in quite specific areas, not necessarily restricting our ultimate aims but at least ordering our priorities. This is where I favour the notion of 'languages for special purposes'. Even in the mother tongue, however, there is a limit to what is within our scope; none of us will ever control our mother tongue in all the possible functions for which it is used. So here too there is only a difference of degree. Whether in first or in second language learning the aim is to succeed; and it is success rather than perfection that I think we need to emphasise. Perfection is a goal that goes with a conception of 'language as rule'; it implies following the rules, getting things right and free of errors. But our language is never error-free, and I think there is too much emphasis on the avoidance of linguistic errors. Success goes with a conception of 'language as a resource'; it is a native-like concept, which highlights the similarities, not in the *process* of first and second language learning but in the nature of the achievement and in our evaluation of what has been achieved.

I would like to end with two points made in an anecdotal vein. The first concerns my own experience in Chinese. When I was leaving China, I wanted to bring away various books and other objects of value with me, and this was subject to certain export restrictions. When I went to apply for a permit, I discovered that instead of there being a form to fill in, the applicant had to write a letter setting out exactly what it was he wanted to do. I was in rather a hurry, having moved out from where I was living, and I said I would like to write it on the spot. The official looked rather surprised, but gave me a piece of paper, and I wrote out a letter in documentary Chinese applying for an export permit and giving all the details about the books and other things I wanted to export.

The letter was undoubtedly not free from errors. But documentary Chinese is a very special form of Chinese, not like literary and not like colloquial, and I had never before had to write anything in that variety of the language. Nor had I ever studied it systematically. If I had been given a classroom exercise requiring me to write something in documentary Chinese, I would not have known where to start. I had no notion that I knew that language; but under this pressure, when I had to write something quickly, I wrote it right off without the slightest hesitation. This illustrates for me the fact that it is unreal to assume that the classroom situation can be in any sense like real life, because one cannot bring about these conditions in any kind of organised teaching situation.

As a learner of foreign languages, I am about average, somewhere around the middle of the scale both in experience and in ability. But the particular problems I have are ones which never seem to get into the literature at all. I have no trouble with grammar; I can learn the grammar of any language in a few days, and although of course I make mistakes, they are ones which don't matter — they don't affect communication. And without too much trouble I can work up an intelligible and inoffensive pronunciation.

But I have one immense difficulty in foreign language learning, and that is lexical memory. Where has this been seriously discussed? I can find references to the fact that learning vocabulary is *not* a problem, and I wish I could be convinced by them. But to me it is almost the only problem. I can

look up a word in a dictionary a hundred times and the hundred and first time I meet it I still don't know it and I've got to look it up again. The only way I can learn a word is by hearing it, and then using it myself in a living context of speech.

As I have stressed all along, not everyone learns in the same way. But I do not believe that I am unique; there must be other people like me who have this same problem. Is anything being done to help us solve it?

I have another minor problem, and this is one that a few people, such as John Oller, have begun to talk about, namely that in a foreign language I don't know what to say. This applies as much to learning a second dialect as it does to learning a second language. People say different things and one has to learn the semantic styles. You have to recognise that in some way or other, as Joan Maw remarks, when you are learning a new language you are learning a new reality. We can refer to this by the metaphor of being resocialized; what it means is that the foreign language learner is constructing a new reality, a reality in which people exchange different meanings, and he has to learn both the relevant contexts of situation, together with how to identify them, and the particular meanings that are likely to be exchanged in any type of situation he may encounter.

I do not mean to suggest that an association for applied linguistics should devote its efforts to solving my own particular problems in language learning. So let me end with an example of a typical human problem of a kind needing to be approached through applied linguistics. In 1974 there was held in Nairobi a UNESCO Symposium on Interactions between Linguistics and Mathematical Education, in which linguistics and mathematics educators came together to look into the linguistic problems associated with the teaching of mathematics, with particular reference to various countries of Africa, including some in which the normal medium of instruction is English and others in which it is an African language, for example Swahili or Yoruba. Some of the problems are of an institutional-linguistic kind (in Trevor Hill's sense), relating to language policy and planning, creation of terminology and so on. Others relate more closely to the topic I have been discussing: for example, it is likely to be easier for a Luo speaker to learn Swahili than to learn English because, although neither language is related to his own, Swahili belongs to the same culture area and therefore largely shares the same meaning styles; but for the mathematics learner much of this advantage may be thrown away if the Swahili mathematics textbooks are simply translated from English, since the mathematical concepts will be introduced and interrelated in ways which reflect the meaning styles and folk mathematics of European languages instead of those of East Africa. This is an example of a fundamental problem in applied linguistics; and it is something which has immense importance for the lives of large numbers of people in the world today. It is also an example of the sort of problem to which I very much hope that the efforts and energies of an association such as this will come to be directed.

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