CHAPTER IV

HYPOTHESES REGARDING LANGUAGE LEARNING/TEACHING

4.0 Introduction

This chapter falls into three parts:

(1) clarification of the assumptions underlying the visualization of the (second) language learning process,

(2) a visualization of the process of (second) language learning,

and (3) stating the hypotheses regarding the learning/teaching of second languages.

4.1 The assumptions underlying the visualization of the (second) language learning process clarified

The 'assumptions' mentioned above will be clarified under two heads:

(1) Language: the nature of the phenomenon,

and (2) Language learning: the nature of the process.

4.1.1 Language: the nature of the phenomenon

Language is such a complex and inexplicable phenomenon that different people have looked at it in different ways and
expressed different kinds of views about it; it is difficult to arrive at a single comprehensive definition of it that takes into account the various aspects of its nature at once. The best we can do perhaps is to bring together a number of the various definitions available, study them, and arrive at a better understanding of the nature of the phenomenon — by looking at it from various angles as it were.

4.1.1.1 A number of definitions drawn from various sources

...speech is a non-instinctive, acquired, "cultural" function .... Edward Sapir (1921), p. 4.

Language is a purely human and non-instinctive method of communicating ideas, emotions, and desires by means of a system of voluntarily produced symbols .... (ibid., p. 8).

.....the essence of language consists in the assigning of conventional, voluntarily articulated, sounds, or their equivalents, to the diverse elements of experience...... (ibid., p. 11).

The latent content of all languages is the same — the intuitive science of experience. It is the manifest form that is never twice the same, for this form, which we call linguistic morphology, is nothing more nor less than a collective art of thought, an art denuded of the irrelevancies of individual sentiment. At last analysis, then, language can no more flow from race as such than can the sonnet form.

Nor can I believe that culture and language are in any true sense causally related. Culture may be defined as what a society thinks and does. Language is a particular how of thought.... (ibid., p. 218).
Language is the most massive and inclusive art we know, a mountainous and anonymous work of unconscious generations..... (ibid., p. 220).

..... that language has a code made of signs that are both arbitrary and conventional, and that these signs have meanings, values, and functions which form a system of systems..... / W.F. Mackey (1973a), p. 11/.

Language is a system of systems composed of arbitrary and conventional signs forming a code suitable for communication..... (ibid., p. 14).

Language is the fabric of our thinking, the vehicle of our social existence..... / A.H. Marckwardt (1973), p. 23/.

Language is a way of communicating meaning..... and this essential characteristic should not be left out of language lessons..... / M.R. Saville-Troike (1973), p. 104/.

Language is a series of natural phenomena

Language is the medium by which thoughts are conveyed from one person to another..... Language is the mirror of thought (if only the distorting mirror) and both reflector and reflected are conventional..... Language is the dim reflection of thought, and, paradoxically enough, it is at the same time the instrument of thought.....

The only aspect of language in which the conscious will of man can manifest itself is that concerned with its graphic representation. The alphabetic aspect alone is artificial, the literary aspect is artistic, the rest is natural science..... / H.E. Palmer (1917), pp. 8-9/.

..... a language, considered fundamentally and shorn of its accidentals and by-products, is nothing other than, and nothing less than, the thing that we think with: the instrument of thought. / Palmer and Redman (1932), p. 79/.
Spoken language can be defined as the use of sounds and combinations of sounds in commonly established patterns (words) arranged in commonly understood sequences (word orders, sentences) to communicate — to express a thought. \( \text{T.E. Berry (1971), pp. 3-4} \).

..... a system of arbitrary vocal symbols by which thought is conveyed from one human being to another. \( \text{J.P. Hughes (1962), p. 4} \).

Language is a structured system of arbitrary vocal sounds and sequences of sounds which is used, or can be used, in interpersonal communication by an aggregation of human beings, and which rather exhaustively catalogues the things, events, and processes in the human environments. \( \text{J.B. Carroll (1961a), p. 2} \).

..... a structured system of arbitrary vocal symbols by means of which members of a social group interact. \( \text{Joseph Bram (1966), p. 2} \).

..... systematized combinations of sounds which have meaning for all persons in a given cultural community. \( \text{Thomas Pyles (1964), p. 3} \).

4.1.1.2 A discussion

Some of the prominent attributes/descriptions of language emerging commonly from many of the above definitions are that language is:

(1) purely human
(2) non-instinctive and acquired
(3) composed of arbitrary and conventional symbols
(4) voluntarily produced
(5) a system of systems
(6) a structural system for conveying meaning or transmitting thought

(7) the code for communicating ideas, emotions, desires, etc.

(8) the medium of social interaction

(9) the mirror/reflecting, instrument, fabric, medium of human thinking.

The former five among the nine points above define the nature of language, whereas the latter four describe its functions. We, in this discussion, are more concerned about the functions of language, in other words, the nature of the relationship between man and language. It is evident from the points listed above how intricately linked language is with the very 'being' of human beings; life as human beings would almost be impossible without language. Lenneberg (1973) remarked:

My own theory is that language is intimately related to human forms of cognition and perception. This means that the history of human language can only be told in connection with the history of the human forms of knowing the world. (pp. 59-60).

A language, any natural language, is a medium of human thinking — is for conveying 'meaning', for the expression of ideas — is for the projection of the human
mind which is really the innermost core of human existence, what makes a man a man, distinct from all other beings in creation. A language, any natural language, being so intimately tied up with human existence, there out to be a particular kind of relationship that is fundamental and universal in which the human mind holds itself to a language. Any/Every language is for the projection or the expression of the human mind. This is the primary function of all human languages, and all languages originated and evolved for the fulfilment of this function. It may not be possible for a human mind to look upon a language other than as its own reflection.

What emerges from this is that a human mind can have only one purpose for 'storing' a language within itself — only for retrieving it for voluntary reproduction. A mind 'stores' a language (any language) only for the purpose of using it for expressing itself; there cannot be any other purpose behind the internalization and the storing of any language by a human mind.

What further emerges from this is that, if a language is internalized only to be retrieved for communication, it can be internalized only in the retrievable form; there has to be a particular strategy for doing this,
and the human mind will have to use this one and the same strategy for internalizing any language, its first, second or the nth one. The process of first language 'acquisition' and second/foreign language 'learning' will all have to be the same essentially. If what is meant by 'acquisition' and 'learning' is the process of internalization as it does in this study, there cannot be any difference in the process, or the way in which language is finally absorbed and stored by a human mind. The differences are in the nature of the input fed to the mind (depending on the language being the first, the second, or whatever) and therefore in the nature of the 'processing strategies' used by the mind to react to the input received. These may vary considerably from the first language to the second to the nth; but the final 'storage strategy' will have to be the same in all cases. And this is the strategy we are ultimately interested in; our effort is to help forward the 'final storing' of a second language, so that this process may take place with greater efficiency. And, as there cannot be any difference between first and second language internalization in this respect, as argued above, this study proposes to visualize the process of first language internalization, in order to arrive at a description of the nature of the process, and thus
to be enabled to put forward certain hypotheses regarding the learning/teaching of second languages. Richards and Sampson (1974) observed:

Theories of second language acquisition traditionally have been the offspring of general linguistic theory, sometimes supplemented by insights from psychology. While current linguistic theories are more insightful than previous ones, there has not been a corresponding increase in the descriptive or explanatory powers of theories of second language acquisition. Lacking an obviously relevant linguistic theory, researchers in second language learning may be compelled to develop new theories relevant to the particular domain under investigation. Such theories might be specific to second language acquisition. At the same time the data gathered could perhaps provide corrective feedback to general linguistic theory and to language teaching practice... (p. 3).

These are the aims/purposes envisaged by this study in attempting the exercise of visualizing the process of first language acquisition and then theorizing on this basis about second language learning/teaching.

We now move on to discuss certain other aspects of the nature of language:

The child's awareness of language cannot be isolated from his awareness of language function, and this conceptual unity offers a useful vantage point from which language may be seen in a perspective that is educationally relevant. M.A.K. Halliday (1973), p. 20.
......we are led into the more fundamental question of the relationship between the functions of language and the nature of the linguistic system. (ibid., p. 23).

What is evident from the two above extracts from Halliday are the following points:

(1) There is no viewing of language except in terms of the functions it performs.

(2) This way of viewing language offers a perspective that is educationally relevant.

This is in keeping with what we have been arguing so far in this study: language exists only for its functioning, and if its primary function is the projection of the human mind, a language acquirer internalizes language primarily for the performance of this function, and in education if languages have to be 'taught', the learners will have to be helped in internalizing them the way they will be stored for later retrieval for communication.

Halliday further observed that the linguistic system can only be structured in accordance with the nature of its functioning; the functioning of language, therefore, determines not only the internalization process/strategy but also the structuring of its system. According to
Halliday, the function determines the structuring, and the structuring in its turn determines the process or strategy of internalization. In any case, Halliday, like many of his predecessors in the field, saw the universality of language-function, and its determining role in the internalization/acquisition strategy.

M.B. Frith's (1976) well-documented study of Second Language Learning provides us with a basis to hold on to the above assumptions. In her introduction she wrote:

Chapter 2 of this study explores the relationship between first and second language learning. By means of a critical analysis of a number of key studies in the field of L1 research this chapter aims at showing that although there are certain variables which prevent the processes from being identical, there are nonetheless certain basic similarities, which if they are capitalized on in L2 learning contexts, the latter could be a more productive learning process for adolescents and adults than is currently the case......, although this is not the major focus of the study, an attempt will be made to see whether the data offer any support for the posited similarities between L1 and L2 since this will in turn point to the existence of universal cognitive strategies at work. (p. 7).

In Chapter 2 (entitled A Comparison of First and Second Language learning) she began by examining 'a number of L1
research studies in an attempt to discover whether the hypothesized similarity between L1 acquisition and L2 learning has any empirical support'. (p. 8). She continued:

Is L1 like L2?

In recent years two major changes can be noted in the views expressed by researchers studying L1 acquisition. One is that linguists, are now beginning to pay increasing attention to meaning. They now realize that the function of language in the life of the child is of paramount importance in his acquisition of his mother tongue. (Bloom, 1970; Schlesinger, 1971; Parisi et al, 1973; R. Brown, 1973). (p. 8).

She further observed that:

In addition to recent developments in psycholinguistic research, observations of the fact that L1 acquisition is successful, "virtually foolproof" (Stern, 1970), and L2 learning is not, have led to a re-examination of the relationship between the process of acquiring a first language and that of L2 learning. All this has resulted in the general conclusion that the two processes are basically similar but that methods of L2 teaching have not capitalized on the similarities..... (p. 10).

(The emphases in all the three above extracts are mine.)

The remarks lend enough support to our assumptions; on the basis of these statements and similar others referred to earlier on in sections 2.2.1 and 2.2.3, this study
assumes with conviction that first language acquisition and second language learning (in the sense of language internalization) are essentially the same kind of processes: there is essentially only one process that happens in language learning, whether the language is the first or the second; in other words, there are 'universal cognitive strategies at work in language learning' as quoted above from Frith. Steinberg (1982) remarked:

.....it would seem that certain basic operations involved in sentence understanding or production would be similar for a first or second language..... (p. 165).

Corder (1967) expressed the view that:

It still remains to be shown that the process of learning a second language is of a fundamentally different nature from the process of primary acquisition.

If we postulate the same mechanism, then we may also postulate that the procedure or strategies adopted by the learner of the second language are fundamentally the same. ..... some at least of the strategies adopted by the learner of a second language are substantially the same as those by which a first language is acquired. Such a proposal does not imply that the course or sequence of learning is the same in both cases. (p. 22).

4.1.2 Language Learning: the nature of the process

We have already argued that the nature of language-
function determines to a great extent the nature of its internalization process. The primary function of language, as we have seen, is the communication of 'meaning', and therefore, communication strategies can naturally be expected to play a decisive role in the language acquisition process. The basis of communication is in the encoding and decoding of 'meaning'; the language learning process is, therefore, intrinsically related to meaning encoding and decoding strategies.

When we start with this premise we grant the existence of 'meaning' apart from language in the human mind. If meaning exists only in terms of language, then it may be argued on a prioristic grounds that there cannot be any encoding and decoding of meaning in linguistic units; nor can there be any projection or expression of meaning using language. Palmer and Redman (1932) expressed the view that language is the 'garment' that gives 'shape' to our thoughts. They used the extremely revealing analogy of 'the invisible man' (from H.G. Wells's short story) to explain how clothes can define the shape of an invisible body:

It is often said that words are the garment of thought, and within certain limitations this is unquestionably true. That thought preceded language is not only the considered
opinion of an authority on the subject like Sapir, but must be the natural conclusion of any intelligent layman. Watch a baby and see how it struggles with an evident desire to define a need or a perception..... (p. 79).

According to Palmer and Hedman the baby knows all that it needs to know about the substance 'milk' long before it identifies the linguistic unit 'milk' with what it signifies. Once he identifies the two, for ever afterwards a portion of 'indefinable thought' stands defined for him:

His thought has been crystallized because it has been given an instrument or a garment, or what you will. And from that day onwards it is a clear thought because of the garment you have provided to give it shape...... The invisible man, once clothed, could see his own shape; in the same way the shape of a thought can be perceived only when clothed in language. (pp. 79-80).

According to Palmer and Redman, the language internalization process is a process of assigning shapes to thought, defining them, and 'fusing' them with the linguistic units which represent them. These linguistic units may be single words, phrases, or even (short) sentences or complete utterances. Hunter Diack (1966) has also expressed similar views about the language learning process. (p. 33).
4.1.2.1 Halliday's views on the nature of the language learning process

M.A.K. Halliday (1975) revealed great insight into the matter, when he wrote:

Language as Meaning Potential. We shall begin by considering the child's learning of his first language in the period extending roughly from six to eighteen months of age. Our approach to this will be through semantics, the learning of language will be interpreted as the learning of a system of meanings. A child who is learning his first language is learning how to mean; in this perspective, the linguistic system is to be seen as a semantic potential. It is a range of possible meanings; together with the means whereby these meanings are realized, or expressed. . . . (p. 8).

Halliday went on to clarify that 'the viewpoint that we are taking is a functional one'. He related meaning to 'linguistic function', 'to the functions that language is made to serve in the life of the growing child'. Halliday cited 'two reasons for looking at it this way':

The first is that the functional approach is of value in its own right, in that it gives us insight into the reasons why the child takes the steps he does. If we have a functional viewpoint, we may be able to suggest why it is that the child builds up the system in the particular way he does: . . . . The second reason for looking at the process from a functional point of view is that it also gives us some
insight into why the adult language has evolved in the way it has. The human brain would have been capable of constructing a hundred and one different types of semantic system; why is it that language evolved in this particular way as a semiotic system with the particular properties that it has? If we examine this question developmentally, we can see that the adult linguistic system is structured in a way which reflects very closely its functional origins. (p. 8).

Halliday's key-statements are:

(1) A child who is learning his first language is learning how to mean.

(2) The adult linguistic system is structured in a way which reflects very closely its functional origins.

Let us put these two statements together, and we go straight to the heart of the matter by doing so. The second statement says that language had 'functional origins'. Halliday has also said that meaning is related to 'the functions that language is made to serve in the life of the growing child'. What are these functions that language is made to serve? Language is used as a set of moulds for putting out what the mind desires to put out or express. And, what are these things that the mind desires to express? They are generally known by the collective label 'meaning'. 
Therefore, the function of language is to express meaning, and language originated as a set of moulds for containing and putting out meaning from man's mind. Meaning, therefore, has an existence prior to and apart from language. But the mould which is used for putting each bit of it out gives it shape and visibility. The effort of the language acquiring infant is to put out meaning in the moulds presented to him, or to shape his meaning; in other words, as Halliday said, he is 'learning how to mean'.

.... concepts are essentially non-linguistic (or perhaps better, alinguistic) because they are classes of experience which the individual comes to recognize as such, whether or not he is prompted or directed by symbolic language phenomena. Because the experiences of individuals tend to be in many respects similar, their concepts are also similar, and through various processes of learning and socialization these concepts come to be associated with words. The "meanings" of words are the socially-standardized concepts with which they are associated. One of the problems in teaching concepts is that of teaching the associations between words and concepts, and this is analogous to a paired-associate learning task....

\[J.B. \text{ Carroll (1964), pp. 201-202}\]

Carroll has thus summed up for us our discussion so far in a clear and succinct manner.

Halliday (1975) further observed that:

The term semantic is not to be understood in the restricted sense of 'lexicosemantic',
i.e., concerned with the meanings of words. It refers to the totality of meaning in language, whether such meaning is encoded in the form of vocabulary or not. A child cannot learn word meanings unless he also has words — that is, an organized vocabulary, not necessarily in the phonological shapes of the adult lexicon. But it is our contention that the learning of language is essentially the learning of a semantic system, and that this process is already well under way before the child has any words at all. He learns to mean long before he adopts the lexical mode for the realization of meanings. (p. 9).

The growing infant is the recipient of language in its totality and this input starts in his mind, the process of forming the semantic system underlying the language, long before he begins to acquire its words. Words present themselves to him by and by as certain 'primary moulds' into which he can conveniently put out some of his most essential meaning-units, or some of his meaning that is already well on its way to being linguistically structured.

The above point brings us to an important juncture in our discussion. What did Halliday mean by 'before the child has any words at all'? We talk about a child 'having words' when he begins to utter words. We very often forget that children 'have' words long before they can utter them — 'have' in the sense of 'understand'. Much more than we can 'produce' is always 'comprehended' is a position granted by many noteworthy linguists. (cf. Frith, 1976; Steinberg,
1982) This could mean that there are two levels of language internalization: (1) a level at which language-units are 'recognized' for their meanings or functions, and (2) a level at which some of these units are 'stored' in such a way that they are retrievable for use or production to convey meaning. What does this mean? If we grant that language learning/internalization is a process of linking or 'fusing' language-units with meaning-units (as we have been arguing so far), then we ought to grant also that there are two levels of this fusing, if we have to explain this phenomenon of some linguistic units being available (only) for recognition of meaning, and not for production or the conveying of meaning.

4.1.2.1.1 The language learning continuum

In all probability, the fact ought to be that the language internalization process has a continuum pertaining to each linguistic unit. Even the 'understanding' of a word, in its proper or full measure, does not happen all at once. It is a long continuum in which, through many encounters, the understanding of a particular word or linguistic unit grows towards fullness. At some point during such a continuum, the learner manages to retrieve the unit once to convey a unit of meaning that forms in his mind. Then he uses it again, and again, and again....
each time there is an added facility with which the unit occurs or presents itself to him for use. At last he reaches a stage when it is readily available to him for use at any time. The whole process is one long stretch of activity. Therefore, instead of visualizing 'two levels', we ought to visualize a continuum of the internalization process (pertaining to each linguistic unit) during which the understanding of the particular unit keeps growing towards fullness and the (re)production of the unit begins at some point and acquires greater and greater facility. If it had not been so in his understanding, Halliday could not have said: 'He learns to mean long before he adopts the lexical mode for the realization of meanings', because by saying so Halliday would have contradicted himself and would have failed to make sense after his initial statement that in learning a language the child is 'learning how to mean'.

In this initial statement the whole process is visualized as a process of 'learning how to mean'. Unless there is the conception of a continuum in which the process of 'learning how to mean' begins very early and the 'adoption of the lexical mode for the realization of meaning' occurs later, Halliday's latter statement can very well be taken to mean that the 'adoption of the lexical mode' is
not part of the language learning process, and that the real language learning process takes place before the 'adoption of the lexical mode'. The visualization of the continuum explains not only both Halliday's statements but also Palmer's view about the 'fusing' (section 2.2.3.3): at the end of the continuum, the linguistic unit stands 'perfectly fused' with the unit of meaning it represents. The greater the number of meaningful/purposeful encounters the learner has had with the linguistic unit, the greater the number of times he has linked it with the corresponding meaning-unit, the more thorough will be the 'fusing' effected, and the higher will be the facility with which it makes itself available to him for use at the two levels.

4.1.2.1.2 The two levels of language use

It is the use of the linguistic units (and not its internalization process) which falls into two levels: (1) the level at which it is used only for the retrieval of its meaning, and (2) the level at which the unit itself is retrieved for conveying the meaning it represents. And, these two levels in the use only mark two stages in the internalization continuum pertaining to that particular linguistic unit.

If we visualize the language internalization process
as a process of structuring the meaning in the learner's mind, then also, the concept of the continuum holds good. Structuring of meaning, essentially, is a process of drawing boundary-lines around units of meaning in such a way as to match the semantic boundary-lines drawn around the linguistic units: the one structuring system has to match the other in the language learning process. In the beginning, the boundary-lines drawn by the learner around meaning-units and also around the language-units (Every learner begins by drawing his own semantic boundary-lines around the linguistic units presented to him.) are rather blurred and indefinite. As he advances on the various internalization continuums (There is a continuum along which each language-unit proceeds in the learning process.), his lines fixing the semantic boundaries of the linguistic units and those fixing the boundaries of his meaning units become clearer and better defined, i.e., the meaning-structuring in his mind acquires greater approximation or conformity to the conventional meaning-structuring found in the language in question: the two systems of structuring match each other well enough for his effective functioning in the language. This is just another way of viewing the language internalization continuum. Whether we call it a 'fusing' or a 'structuring' process, what,
in effect, happens or ought to happen at the end of the continuum is a good enough 'mapping' of one of the structuring systems onto the other. Peter Lloyd (1983, p. 105). Along the continuum the 'mapping on' becomes more and more accurate, i.e., the boundary-lines in each system become progressively less blurred and better defined. In the end the two systems become almost identical in their structuring and there is an almost perfectly matched unit from the one system quite easily available to the language learner/user to correspond to practically any unit from the other system presented to him. This statement takes for granted the language learner's capacity for the breaking down and reassembling of basic units in both the structuring systems and the linking of the newly assembled units in the two systems (as argued out in section 2.9 above) for original communication or the creative use of language.

4.1.2.2 Summing up

The 'continuum' concept thus makes the language internalization process a somewhat clearly visualizable one. As already pointed out in section 2.8 above, we can never hope to be able to present a picture of the actual process axiomatically, but only study its empirically observable outcome and make guesses about the process
happening internally. This outcome, which is the capability for understanding and conveying meaning in relation to the language in question, forms a continuum corresponding to the one reflecting the actual internalization process. This latter one is not available to us for empirical observation, whereas the former is. We study the former in order to make guesses about the latter, and through trial and error we hope to arrive at the right stimuli which will produce the right outcomes and ensure the right process(es) having taken place.

One point of clarification which has to be added here is that both the observable and the unobservable continuums are not singular in character; both are 'multiple' continuums constituted by a number of 'mini' continuums, each of which pertains to one particular language-form/unit. Several such 'mini' continuums are simultaneously in progress on both the 'multiple' continuums during the process of language learning. A cross-sectional view of either of the 'multiple' continuums taken at any given point of time during its progress will reveal an interesting picture; it will present a facet characterized by a number of different language-forms/units at varying levels of understanding. Levenston (1979) and Teichroew (1981-82) both endorse a similar 'continuum'-view of the language acquisition process.
The visualization of the language learning process that will be presented in the following section will be based on the outcomes observed, but will go on to offer speculations about the actual process at each step and will also propose in the subsequent section the stimuli which it will be argued, cause the intended process(es) to happen and the desired outcomes to be produced. These will be presented as hypotheses regarding language learning/teaching.

J.B. Carroll (1961b) provides us with the following insight into the matter.

The process of language learning can be described in general terms in this way: throughout his language development, the child learns what verbal or gestural responses will get what he wants or fend off what he dislikes, and what responses on the part of others are the cues for what he wants or does not want. In effect, he is learning the "semantics" of the language. At first the responses involved are very gross or global, but gradually they become differentiated and structured. Somewhat as a linguistic scientist learns what distinctions are critical in a previously unanalysed language, the child discovers the critical distinctions in his language by an unconscious trial and error process. (p. 333).

The former half of the above extract from Carroll highlights the idea of language-development in the child being functionally determined (an idea which we had from Halliday
as well earlier on), and the latter half provides us with the key-phrase 'critical distinctions'. These two points will be at the basis of our discussion in the following visualization of the language internalization process.

4.2 The process of language learning visualized

Before presenting the picture of the visualized process, we state our basic assumptions once again in brief:

4.2.1 The basic assumptions

(1) First language 'acquisition' and second language 'learning' are essentially the same process: the cognitive strategies involved in both are universal or basic to language acquisition/learning in general; therefore we visualize the process of first language acquisition in order to propose hypotheses regarding the process of second language learning/teaching.

(2) There are two 'continuums' involved in the language internalization process: one is the continuum along which the actual process advances, and the other is the one along which its observable manifestation or the outcome advances; the two continuums progress simultaneously and in correspondence with each other.

(3) The first continuum is not available to us for observation and study, but the second is.
(4) There are stages observable in the second continuum; there ought to be stages corresponding to these in the other continuum.

(5) As the observable features of the stages in the second continuum ought to reflect features of the corresponding stages in the other continuum, it should be possible to make credible/viable speculations about the nature of the process on the first continuum by studying the manifested behaviour on the second continuum.

(6) Language learning has functional purposes, the primary function of language being the communication of 'meaning'.

We attempt a presentation of our 'picture' on the basis of the above assumptions.

4.2.2 The premise

The new-born infant's mind is not a tabula rasa.

(This position was amply supported by our discussion in Chapter III.) The child is born with the cognitive equipment [cf. 'innate learning mechanism(s)'] — Chapter III — for the internalization of language: he is endowed at birth with a kind of 'cognitive structuring' in his mind
which acts as the primary basis for the language internalization process. He is born also with a (pre)-disposition for meaning.

4.2.3 The 'picture'

Linguistic and non-linguistic input is sensorily received continuously by the child into the cognitive domain of his brain; these various bits of sensory input act and react with the cognitive structuring already existing there, in order to produce a meaning-structuring framework in its most elementary form in the child's mind. The semantic boundary-lines initially formed in this very elementary meaning-framework are extremely blurred and have no definiteness about them. It is this rudimentary meaning-framework at the genesis of the language internalization process which by and by undergoes a long process of refinement and re-refinement until it attains the level of sophistication required for the desired amount of effectiveness in the use of the language. (At the advanced language-user's level, innumerable partitioning lines run criss-cross over the domain of meaning, cutting up the total meaning into innumerable infinitesimal parts encompassed by boundary-lines of remarkable precision and decisiveness, in order to form an undescribably intricate pattern or network of meanings.)
The earliest recognition of the linguistic input as being different from other kinds of input comes to the child when he begins to distinguish between human voices and other noises; it may be conjectured that at the very start of the infant's earthly life, human voices are part of noises in general. By and by the human voices begin to stand apart, and then, little by little comes a vague recognition of there being 'sounds' different from one another.

The speech-sounds initially do not stand out as distinct phonemes of the language in question; they present themselves to the infant as clusters of sounds. Often the initial clusters that the child recognizes coincide with the 'names' of the 'objects' nearest and dearest to him, e.g., 'mama', 'milk', etc. The discrete phonemes are later recognized (the recognition of the 'critical distinctions', Carroll, 1961b) through the application of the principle of 'recurrent partials', Chandrasekhar, 1965. The fundamental question we have to answer at this point is: What causes (or makes possible) the formation of the above-mentioned earliest 'notion'-symbol links? The only plausible answer is that the action-reaction processes continuously happening in the cognitive domain of the child's mind prepare the ground and make
way for these to be formed. The recognition of the distinctiveness of human voices prepares the ground for the later recognition of the distinctive speech-sound-clusters. The linking of some of these with the corresponding 'notions' will take place only if the readiness for such linking has been produced in the rudimentary organisation of the elementary meaning-structuring framework existing in the mind of the child.

Non-linguistic pieces of sensory input help the child to recognize (mainly through vision initially) different objects or entities as being distinctive in character. This recognition gives him the preparedness to admit divisions inside the elementary semantic framework in his mind and also to look for mental representations of the different entities perceived. Such preparatory processes make the readiness for the formation of the earliest 'notion'-symbol links.

At this point we go back to remind ourselves about two of our basic assumptions, namely, that language has functional origins and that its primary function is the transmission of meaning. Therefore, language-units signifying 'objects' or 'notions' which are functionally the most important or units which embody the most essential
meaning-units will have the greatest prominence and the highest priority in the language internalization process.

We remind ourselves also about the continuum concept. The degree of the semantic (and therefore functional) relevance of the linguistic units involved in the internalization process will determine the ordering of the items on the continuum on the basis of priority; the order in which linguistic units/items are internalized by the child will be in accordance with the order in which the items arrange themselves on the continuum on the basis of their semantic/functional relevance to the child. This is the reason why it so happens that the earliest words acquired by the child are the 'names' signifying 'objects' nearest and dearest to him like 'mama', 'milk', etc.

Here we branch off to consider the two different continua separately. On the learning outcome continuum we notice first of all the appearance of isolated words. Simultaneously, what do we expect to be happening on the internalization process continuum? As more and more isolated words appear on the observable continuum, we expect further and further semantic divisions to take place on the unobservable front. The advancement on the unobservable continuum will be towards greater 'variegation'
in the division, patterning and structuring of meanings, so that there is already some sort of an initiation into the long process of 'refining' meanings for precision and sophistication.

The two continuums thus proceed further. What is the next noticeable 'stage' on the observable continuum? The child next produces linked-word utterances, apart from the isolated word utterances he continues to produce. In what way is this observation significant for our purposes? What is the child's rationale for the linking of words, or, what is the criterion on the basis of which he chooses the words to be linked together? We remind ourselves once again about language primarily being functional. There are certain functional 'links' necessary for the proper (cognitive) structuring or patterning of notions and meanings. For example, there is a functional link between the concept of food and that of the activity of eating. Such links are made in the general or linguistic cognitive domain. But these functional links will have to be reflected in the linguistic domain too so that language may become usable for communicating functionally linked notions. This would mean that there has to be quite a complex linking activity going on in the linguistic domain. Apart from building habit-forming 'simple' links or associations
between (isolated) notions and their linguistic representations, there will also have to be 'complex' notion-symbol linking when the notions involved themselves stand functionally linked together. The child perceives associations on two different 'planes' in the cognitive domain, one of these 'planes' being a-linguistic and the other being half-linguistic. He incorporates both the 'planes' into a single strategy of internalization which manifests itself in the linked-word utterances that he produces. On the observable continuum at this stage we notice linked-word utterances appearing; on the unobservable front, simultaneously, there are 'complex' links or associations fast being built between functionally related notions and between linked notions and words which are again linked on the same basis. This brings us to terms with the concept of the 'mapping' (Lloyd, 1983) of the meaning-structuring in the mind onto the semantic structuring in the language, the meaning boundary-lines and the linking lines — all the features of the pattern of the one structure — matching the corresponding ones of the other.

Language will not be usable for communication unless it is internalized in 'chunks' (Newmark, 1966) reflecting the cognitive patterning of meaning, and not in isolated words.
Now we go back once again to the factor underlying the parameter along which the language internalization continuum advances, namely, the degree of the semantic/functional relevance of linguistic units. This helps us to understand why the child composes his linked-word utterances, which are sometimes fairly long 'chains', all of 'heavy' meaning-carrying items such as nouns, verbs, adjectives, adverbs, etc. Structural words and inflections appear only at a later stage on his observable continuum, because, functionally speaking, they are the least relevant linguistic items on account of their carrying the least semantic significance. At this stage further and further 'complex' link- formations can be expected to happen on the unobservable continuum. Steinberg (1982) observed:

..... A second feature of the child's utterances is the low incidence of function words such as articles, prepositions, and conjunctions. Rather, it is nouns, verbs, and adjectives which mainly appear in the utterances. This is not surprising when one considers that these are the most informative classes of words and would be the first that children would learn to understand.....

..... It is because children's utterances at this stage appear to have the character of a telegram message, i.e., short and with content words, that this phase of speech development is often referred to as the telegraphic stage. (p. 151).

At a later stage, on the observable continuum, inflections, structural words, proper ordering of language-
units in the chain — all the (semantically/functionally) less relevant factors begin to show up. But we notice one rather strange phenomenon at this stage: most of the child's initial sentence-level utterances are almost fully borrowed ones; he borrows from others (sentence-level) utterances 'lock, stock, and barrel' to begin with.

Steinberg (1982) has testified to this. It is in such fully borrowed utterances that the structural elements first appear. On the unobservable continuum, during the last stages of the 'mapping' process, the 'associations' become so complex that there are even complete sentences in the language-structure, the items/units within which are held together for functional purposes and which, again for functional purposes, are linked wholly as a single unit to corresponding meaning-units existing in the meaning-structuring domain of the mind. The use of the structural elements becomes habitual to the child through these 'complex' links that he finally builds (Steinberg, 1982). It is from here that the child acquires the readiness to take off into the free or creative use of language.

The view that the child needs to have a large number of ready-made sentence-level expressions stored in his memory (as quoted from Palmer in section 2.2.3) before he can start using language freely and creatively, and that
language learning, though a highly mentalistic process, is not all rule-learning, but quite a bit of habit-formation as well (as argued above), is amply supported by the following three extracts quoted from D.D. Steinberg (1982):

Familiar phrases like the little boy or bread and butter and familiar sentences like Mary had a little lamb or Where is it? undoubtedly are stored in memory in their entirety as is a lexical item like dog or eclipse. There is no reason to suppose that such sentences need to be created in the way that novel sentences must be. Rather, given that one wishes to express the meaning of one of the stock items, no grammar rules need be applied.... While... habit or conditioning alone cannot account for novel sentence use, it does not follow that habits or conditioning must play no important role in language learning and performance. The fact that speakers are able to produce and understand sentences at the fantastic rate that they do could never be explained, if we supposed that every sentence had to be connected through the application of all related rules.... Aside from providing a direct meaning-sound association for rapid processing of production and understanding, familiar phrases and sentences may provide a basis for the processing of novel phrases and sentences which are similar to them. If we have stored a familiar phrase and sentence, e.g., the little boy and The dog ran, we should not need to reprocess everything when structurally similar phrases and sentences that we have never dealt with before such as the little girl and The cat ran are to be produced or understood. It is likely that through simple substitution (girl for boy and cat for dog) we have entire ready-made semantic or phonetic sequences at our disposal. Undoubtedly, the amount of time that it takes to search through a myriad of stored data is less than that which is needed to produce or understand the sentence through the regular rule-use channel. Direct access to phrases and sentences should be nearly as rapid as it is for individual words. (pp. 122-123).
We think ahead of the conceptual content of what speakers are saying and formulate thoughts and responses based on those suppositions. Conversations, discourse, and text involve a mixture of familiar and unfamiliar content, with the bulk of it familiar. (p. 131).

......, Forster and Ryder (1971) found that a sentence like Mary chewed spears throughout the corrupt talk to be less readily understood than John smoked cigars throughout the dreary play. Such findings clearly demonstrate the role of conceptual expectation, for it is the sentences which are in accord with it that are processed more easily than those which are counter to it. (p. 133).

There is much more of redundancy and the resultant expectancy in language-use than we are often prepared to admit.

4.3 The hypotheses

The above visualization of the language learning process should enable us to put forward certain hypotheses regarding the learning/teaching of second languages.

4.3.1 Introduction

As it has already been mentioned in this study, we may never know how exactly the semantic 'mapping on' process happens in the cognitive domain of the child's brain. But we have at least been able, in this study, to make plausible guesses about what should be happening in the
cognitive domain in correspondence with the observable 'stages' in the child's language learning process. The 'stages' that have been suggested in this study are supported by linguists like Greene (1975), Frith (1976), Steinberg (1982) and others who are less well-known. It should be safe at least to suggest what kind of stimuli ought to produce these learning-outcomes, whatever may or may not be happening in the unobservable domain. If the right intermediary outcomes are produced, then, in all probability, the desired intermediary processes also should be taking place internally to ensure the emergence of the desired final outcome. In any case, we have only been guessing what the internal process must be like. What we have discussed are the observed developments, and our further effort should be to prescribe the stimuli for producing these outcomes.

One word of caution that is called for at this point is that we should not equate language internalization with language production. Let us remind ourselves about three of the observations we made earlier on (section 4.1.2) in this study: (1) the learner is capable of comprehending much more language than he can produce at any given level; (2) the comprehension and the production of a linguistic item are only the manifestations of two different stages
on the same learning continuum; and (3) there is such a continuum related to the internalization of each language-item, and several such continua are simultaneously in progress while the language internalization process is going on.

In the last section we examined the different stages in the outcome of the child's language learning process, i.e., the different stages in his language production. We observed that items appeared on this continuum on a priority-basis, the priority being determined by the criterion of semantic/functional relevance. But let us not forget that the child was not fed discretely with these items that he happened to produce; the input given to the child was entirely different in nature; it was a complex mixture of language. Different kinds of language-items were being received by the child, and a number of 'mini' learning-continuums must have been simultaneously in progress inside his mind. We observed that items with the greatest semantic significance attained to the level of production earlier than other items which were semantically/functionally less significant. To repeat, we discussed only the order in which items were produced by the child, while an extremely active learning process must have been going on in his mind, to
which we had no access for observation and discussion.

4.3.2 Hypothesized implications for second language learning/teaching

What insights, for second language teaching purposes, do we gain by having discussed the order in which language-items appear on the first language learning child's production continuum? Our second language learner also, in spite of being fed with input of whatever kind, can be expected to produce language only on the same priority-basis as the first language learners. In their production they also must begin with isolated words, then linked words, and go on the same way as the child learning his first language does. Snow (1976) observed:

The similarities which exist between the acquisition of a first and of a second language can be largely attributed to the primary role played by semantics in both acquisition processes. (p. 159).

We do not give any recognition to this immensely important factor in our second language teaching programmes, and this, it should be stated with emphasis, is a major flaw in our teaching strategy.

4.3.2.1 Second language learning viewed against first language acquisition

It is a two-fold mistake that we generally commit:
(1) We expect our learners to produce (not reproduce) complete sentences (by way of answers, etc.) at a time when they have no readiness for such an exercise. The second mistake is a more serious one: (2) We do not provide the stimuli to make them produce what they can and should at a given stage.

We have to make the following significant claim at this point: Production is part of the learning process; the child 'learns' further by producing what he has already learned. By making our learners produce the expected items at a given level, we help forward their learning considerably (The first language learning child receives a lot of stimuli for such production and, consequently, indulges in a great deal of such production.); by forcing our learners to produce what they do not have the readiness for, we retard the process considerably, or even stop it altogether. (The child is never forced into such production.)

We should not forget the fact that, at any level, our learners can comprehend much more than they can produce. Let us capitalize on this in our second language teaching programmes. There are simple basic sentences our learners can comprehend when their production is only at the isolated
content-word level. What we should do is to provide simple, basic, complete sentence-level input in order to elicit single-word responses from our learners. This is the strategy of making use of the higher level comprehension capacity to provide the stimuli for activating the lower level production capacity. This is the principle that should guide us in the structuring of our teaching materials, so that the progression of their complexity matches the same as is expected on both the comprehension and production levels of the learners' language internalization.

We observed in section 4.1.2 that language-use happens at two different levels: the level of comprehension and the level of production. The suggested right teaching strategy provides the proper input and stimuli for both the levels simultaneously at any given stage, so that both levels of language-use are simultaneously activated in the furthering of the learning process. Long (1983), after examining 12 studies, concluded that there is a considerable amount of evidence to prove that properly planned instruction makes a great deal of difference to the acquisition of second language proficiency. It is because we do not help our learners forward systematically on their production continuum, following the same order as the first language acquiring child does, that many of our learners, even at
the Intermediate level, write 'sentences' from which most of the structural elements (the least meaning-carrying items) are missing, 'sentences' which are no more than strings of content words. (Evidence for this will be given in Chapter V and the Appendix.) Such are the learners for whom we have to plan a strategy of remediation in this study.

We observed that the child's initial sentence-level utterances are, mainly, fully borrowed ones. The child habitualizes the use of the structural elements through the use of a great many basic sentences internalized as single blocks. Our second language learners are never given the opportunity to repeat, internalize and reproduce (in the same way as a child does) a great many basic sentences. Only such an exercise will give them the readiness finally to take off into the free or creative use of language. The child gets these repetitions (repeated meaningful encounters) of basic sentences naturally from his environment. But in the case of the second language learners there is the need to provide these artificially. Unless we artificially give them occasions to repeat meaningfully (and thus internalize) a great many actual basic sentences of English (not the abstract patterns) we will never enable them to take note
of the 'recurrent partials' that Chandrasekhar (1965) wrote about and the 'critical distinctions' that J.B. Carroll (1961b) wrote about. It is an awareness of these that the first language learning child builds up through the repeated meaningful encounters he is naturally provided with. Our second language learners will have to be deliberately helped in the building of such awareness because the basis for the creative use of language lies in them.

4.3.2.2 Second language learning viewed independently

The typical (Indian) ESL learner who struggles inside the typical (Indian) ESL classroom to learn English, does not start by listening to a lot of English being used in 'natural communication' situations all around him as a native English speaking child does. As was noted in section 3.2.3 above, language learning involves three factors, namely, 'rules', 'forms' and 'meaning'; in other words, it is a process in which the code (being the manifestation of the union of rules with forms) is mastered in the context of meaning encoding/decoding. In second language learning situations of the kind we are concerned with in this study, there is no 'natural communication' situation surrounding the learners, and the learners start with isolated units of the code doled out to them in discrete doses; they are made painfully conscious of the existence of abstract 'rules'
and 'forms', though one cannot say for certain whether or not they are guided rightly for the proper understanding of the functioning of the rules and the forms in constituting the code.

The native learner, when he encounters units of the code, does not look upon them as manifestations of the union of the abstractions, namely, the rules and the forms; instead he looks upon them as the concrete (linguistic) representations of units of meaning. While the native learner starts from the 'meaning' end to proceed towards the tackling of the code, the ESL learner may start from the 'rules-and-forms' end (however imperfectly understood) to proceed towards the tackling of the code. The native learner, at least in the initial stages, is unaware of the dimensions of 'rule' and 'form', leave alone their combination to produce the code; he takes the code for granted; and we (those who study the phenomenon of language acquisition), in our turn, take the knowledge of the code for granted in the native learner's case. In the case of the non-native learner, the knowledge of the code is not, and cannot be, assumed.

There is no suggestion here that the native learner's learning is all 'meaning' and no 'rule' and 'form', and the
non-native learner's learning is all 'rule' and 'form' and no 'meaning'. The non-native learner employs a strategy which takes into account the abstractions of 'rule' and 'form' with as much importance (if not more) as 'meaning', whereas the predominant factor in the strategy employed by the native learner is 'meaning' as it is represented in the units of the code presented to him. This is a crucial distinction we have to keep in view while dealing with ESL contexts.

As was noted in section 3.2.3, all language learning involves 'rules', 'forms' and 'meaning', and irrespective of the mode and the order in which the three are tackled, the end product, namely, the ability to use the language in question, holds all three dimensions within itself in a particular relationship. The paths taken by the native learner and the ESL learner to attain to the end in view may differ; but, as they have to arrive at comparable destinations, in the final stages (i.e., stages before taking off, if at all, into free production in the language), the one type of learner sees the same sort of relationships existing among the three components of his competence as the other type of learner does. Though the native learner may never consciously understand 'rules' and 'forms' as being part of his internalized competence, he would hold
'rules', 'forms' and 'meaning' in the same relationship as does the non-native learner who attains a similar competence. This is the premise on which we argued in section 4.1 above for establishing the basic similarity underlying the processes of first and second language learning. But the two different types of learners, initially, may have different priorities, and the relations existing among the three components/factors involved in the process may be different in the two cases and may keep varying as they proceed towards the goal.

If we are dealing with situations in which the abstractions of the 'rules' and the 'forms' are as much a part of the 'reality' (if not more) as 'meaning' is, we have to face the reality as it exists, and meet it on its own grounds. In the native learner's case, there is so much 'use' and repetition of at least the most commonly used units of the code all around him and by him that the question of his having to be deliberately taught how rules and forms combine to make the code does not arise at all; he is in a position to take the code for granted and proceed under such an assumption towards the activity of code-meaning linking. In the case of the ESL learner, considering the 'meagreness' of his exposure to English, we are forced to see the need for the deliberate teaching.
of the rules and the forms. There are teaching methods (e.g., Direct Method, Natural Method) which try to simulate a natural language learning situation within the classroom. Whatever we may do, and however much we may try, a classroom may remain a classroom, and may never become equivalent to a natural language learning situation. A good enough 'simulation' would require large investments in terms of time and expertise. If we can be a little less obstinate about being 'natural' in the classroom, and allow some room for the 'artificial' teaching of the rules and the forms, such teaching may act as very effective 'short-cuts' to make a slightly more 'rapid' progress towards the goal.

In a situation in which the knowledge of the code cannot be taken for granted, it may be advisable to make sure that the learners are not making mistakes about the rules and the forms, before we proceed towards helping them with (sentence-level) meaning-code linking.

We are not in any way going back upon our initial position that language is finally internalized only as meaning-code links: this position holds good for the native and non-native learners alike. Now we are only making an additional observation that, in the case of the second language learners, it may be too difficult to provide sufficient meaningful repetitions of particular
units of the code so that the learning of the structural elements occurring in them will be automatically taken care of without having to be specially taught. Structural elements such as inflected verbs, words ordered in a particular way in a grammatical string, etc. are instances of abstract rules and forms combining to produce concrete units of the code. If learners' attention can be specially drawn to such elements (making a deliberate effort to do so), we may be able to manage the habitualization of an adequate number of basic (sentence-level) meaning-code links within the artificial environment of the ESL classroom without having to provide for 'simulations' and repetitions that might prove too tiresome.

The problem in our ESL situations very often is that we do not make sure that the necessary structural elements are mastered before we go on to meaningful expression in which the knowledge of the code is assumed. This is because we are not sufficiently conscious that mastery occurs only through the habitualization of their use with understanding: we either teach all about them and do not provide for their use and habitualization, or give some practice in their use (not sufficient practice, because it is impossible to provide sufficient practice in a classroom unlike in real life) without having given the learners
a proper understanding of their functioning. On logical
grounds it can be argued that both methods would produce
only imperfect/unsatisfactory learning, because under-
standing without practice and (insufficient) practice
without understanding both lead us nowhere in language
learning.

In the teaching scheme envisaged by this study,
what is advocated is explicit teaching of the abstract
rules and forms (wherever the knowledge about them is
found lacking), combined with the consolidation of this
learning through meaningful repetitions of specific units
of the code in which the rules and forms taught figure in
active use. We ought to be able to 'do the job' with a
manageable number of repetitions this way. On the other
hand, if we expect our learners to come to an understand-
ing of the necessary rules and forms through practice
alone like a native learner (i.e., without any explicit
teaching of these), we may need repetitions, their numbers
crossing limits manageable in an ESL classroom. The
scheme envisaged by this study visualizes a strategy of
combining 'rules', 'forms' and 'meaning' in a manner that
is both feasible and productive (of intended learning
outcomes) in an ESL classroom. In any case, we endorse
the view that meaningful repetitions of specific units of
the code are necessary for consolidated learning of the kind that forms the basis for free production in language, whether or not the particular situation demands the explicit teaching of 'rules' and 'forms'; explicit teaching of 'rules' and 'forms', if done where required, is only argued to 'speed up' or facilitate the process of language internalization, or to make it more effective.

4.4 Winding up

The first (hypotheses-building) part of the study comes to an end here. The second part, as has already been mentioned, will consist of two chapters: Chapters V and VI. Chapter V will describe the experiment that was undertaken for the partial testing of the above hypotheses, and Chapter VI will state the conclusions regarding remediation that were arrived at through this exercise.