

NATIVE LANGUAGE ACQUISITION AND
SECOND LANGUAGE LEARNING

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DEDICATION

To My Dear Mother, Sisters
and Brothers,
And in Memory of the Greatest
Educator in My Life, My Father.

ACKNOWLEDGEMENTS

The intellectual debt I owe to my supervisor, Dr. F. C. Stork, Head of the Department of Linguistics, stretches well beyond the limits of the work reported in here. The great encouragement I was constantly given by him during otherwise difficult times, maintained in me the kind of insight that made academic curiosity a way of life for me. Discussions and arguments with him have greatly stimulated my thinking and inspired me to take a purely scientific look at intuitive questions. I wish to acknowledge, above all, his patient encouragement and constructive criticism without which this work would never have been carried through or brought to completion. I shall never ever forget his key help at a crucial time of my life in the middle of my research project, the time when my father suddenly passed away without a final farewell!

To my mother, I wish to express my highest admiration and gratitude. Allowing me to pursue my education abroad, at a time when my presence with her would have given her some kind of consolation and support gives a concrete evidence of the unique quality of her motherly devotion, sacrifice and love. She endured all the suffering caused by my father's sudden death in order not to deprive me of the opportunity of fulfilling my father's as well as my wish to continue my higher education in Sheffield. She should remain an inspiration to all those who aspire to become great mothers.

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ABSTRACT

It is a recognizable fact that success in second language learning presents a major problem in the world today and that it will undoubtedly remain so in the foreseeable future. Because of the necessity of maximizing the pedagogical achievements of teaching second languages, a new insight to the assessment of the magnitude of the learning problems of the L₂ learner is long overdue.

The present study seeks to find the main causes of 'difficulty' in the area of second language learning in the hope of discovering some effective ways of overcoming them. The whole study is an attempt to discuss the most problematic and mysterious issue: the 'How' question. Since what actually takes place in the learner's mind is by and large a mystery, and since multidimensional factors underlie his difficulties, particular attention is paid here to a close comparison between the processes of first language acquisition and second language learning. Findings in studies of first language acquisition will no doubt shed some light and be of a great help for diagnosing and subsequently solving the potential problem areas in second language learning.

The main focus of the research will therefore be to attempt to find an answer to the question of whether second language teaching should take specific account of the developmental stages that are likely to mark the acquisition of the first language. In other words, the main goal of

this study is to attempt to organize the main facts that have come to be known about first language acquisition, relate them to second language learning on the basis of the similarities rather than the differences in order to search for a common theory to account for and explain the properties of the language acquisition system.

To produce an analysis of the common and special characteristics of each process (L_1 and L_2), four important areas are dealt with and examined in some detail: the cognitive factor, the environmental factor, the cultural factor and the neuro-affective factor. All these variables are analyzed and discussed in detail, with the result that all of them play important roles in explaining the properties of the language acquisition system. The internal context of the learner (both affective and cognitive) and the external context (both environmental and cultural) appear to be inextricably overlapped, and a complex sort of interaction seems to take place amongst them all, on the grounds of the "four-factor" theory suggested in the present study.

The findings of the present comparative study clearly indicate both differences and similarities between first-language acquisition by children and second-language learning by adults in a formal situation. By way of summary, the present abstract takes into account both basic similarities between the two processes and specific differences in

situation and differences deriving from age acquisition which recognize the distinct character of adolescent/adult second-language learning.

Interference as a significant source of errors together with errors due to the L_2 developmental process of learning such as generalization and simplification are discussed in Chapter 1: "the Cognitive Factor". The intralingual errors did reveal systematic errors common to L_1 and L_2 learners. They also revealed general strategies and developmental patterns used in the learning of both L_1 and L_2 . These similarities tend to confirm a strong version of the $L_1 = L_2$ hypothesis which claims that the acquisition of the first and second language follow identical patterns. Nevertheless, there did seem to be genuine dissimilarities between the two processes. It has been noted that a variety of possible factors influence the L_2 process, including input data, psychological processes and the grammatical, semantic and phonological complexity of the second language being learned in comparison with that of the L_1 .

In conclusion, it can be stated that the present study's orientation is not purely behaviourist nor purely cognitive. It only tips the balance slightly at the early stages of learning to the conditioning processes rather than to the cognitive. This kind of orientation differs from the purely behaviourist's and the purely cognitive's in that it views the two processes as self-regulatory mechanisms influenced

to a high degree by two dominant factors, an internal affective one, and an external environmental/social one. The development of self-other differentiation within the context of the development of operational thought unconsciously leads to and facilitates the acquisition of the L₁ linguistic code. Since no such differentiation is needed on the part of the adult L₂ learner, especially in a formal situation, there is no dominant factor to put his mind off the consciousness of the process with all its complexity and abstract nature, a psychological situation which results in a process which is one of learning rather than of acquisition, i.e. a conscious process rather than an unconscious one, according to Terrell's definition of the two terms, which he puts as follows:

Learning is the conscious process of studying and intellectually understanding the grammar of L₂. Acquisition, on the other hand, refers to the unconscious absorption of general principles of grammar through real experiences of communication using L₂. It is the basis for most first language ability and in terms of L₂ is commonly known as "picking up a language". In most L₂ classrooms, the emphasis is on learning, not acquisition. (1)

(1) T. D. Terrell, "A natural approach to second language acquisition and learning", The Modern Language Journal, Vol. 61, 1977, p.327.

Thus, the present study enables us to draw the right conclusions as to whether or not L_2 learning by adults should recapitulate L_1 learning⁽¹⁾. The answer within the framework of this study is both yes and no. No, first, because the adult has lost certain abilities the child has as a result of the age factor and the rationalization process that dominates, to a greater extent than it does in the case of the child, over instincts and emotions. The stimuli response process because of its closer association with instincts and emotions, is somewhat hindered by the adult's tendency to rationalize, to abstract, and to explain, to question and to compare. The fact that the adult's generalizations must be consciously articulated will make a difference in how they are learned. The difference is mostly affective in nature. The child's ability to derive the rules from raw data without being formally taught them is facilitated by his unconscious assimilation of these rules. The great enjoyment he takes in memorizing a surprising amount of vocabulary is a unique affective process that is closely associated with the unique discovery of his four worlds: the 'inner world', the 'other world', the 'object world' and the 'language world'. This affective experience can never be repeated, since it is closely associated with the 'self', its instincts and emotions. Stork strongly emphasizes this idea when he draws attention to the fact that "...We must be clear about one thing: we can never start with a clean slate again, we can never again learn a language as part of the process of growing up." (2)

(1) See: V. J. Cook, "Cognitive processes in second language learning" IRAL Quarterly, V, Feb. 1977, p.16.

(2) F. C. Stork, So you want to learn a language, (London: Faber and Faber Ltd., 1976) p.5

Yes, second, because the present study would hope to provide the L₂ learner, artificially, by means of pedagogy, with what the L₁ learner has naturally. Although artificial devices can seldom be as efficient as the natural ones, yet by appealing to the L₂ learner's affective domain and communicative instinct in a successful way, and by combining this approach with the intellectual approach of appealing to his ability to reason, compare data and generalize, the present study hopes to utilize in this way the unique capacity of the L₂ learner to a fuller extent. Chapter Five lays down the implications of the general views and findings of the 'four-factor' theory for teaching L₂ in a formal setting. The success of this new insight, however, depends on a number of factors: the teacher, the L₂ learner himself, the textbooks, the environmental facilities, etc. When all these factors are controlled, the 'four-factor' theory seems to offer an interesting and promising experiment with a glimpse of hope for a better L₂ future learning and teaching.

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INTRODUCTION

The final word in the inter-relationship between first language acquisition and second language learning is not available, nor should it be expected. This is partly because language itself is a very complex phenomenon that no one view point can envisage it as a whole, and partly because of the disagreement among scholars about solving the problem of finding a generally-accepted answer to the complicated question of the common processes involved in first language acquisition and second language learning.

Fortunately, however, while those scholars disagree on this fundamental issue, they give primary emphasis to the view that it is inevitable that language teaching should be keenly interested in theories concerning first language acquisition. In the terms suggested by Burke, "... it is felt - rightly or wrongly - that first language acquisition and second language learning must bear some very direct relationship to each other." (1)

Practically speaking, investigating second language learning has been evoked by the difficulties with which the process is fraught. Language scholars themselves advise the learners not to expect miracles: "Somebody once said that in order to learn a language you need the patience of Job, the memory of an elephant and the stubbornness of a mule." (2)

- (1) See: S. J. Burke, "Notes and discussion: Language acquisition, language learning and language teaching", IRAL, Vol. XII, 1, Feb. 1974, p. 58.
- (2) F. C. Stork, op. cit. p. 61.

In view of this fact, psycholinguistic investigation in this field was carried out by a number of applied linguists, who when comparing young children learning their first language with relative ease with grown ups learning a second language with more difficulty, believed that the latter are severely handicapped in this respect especially in a classroom setting. The results achieved out of the investigation have been far from providing a unified picture.

In an attempt to predict and find the main causes of the learning difficulties faced by L₂ learners, which are still a baffling problem, a number of linguists, psycholinguists and educationalists held the common belief that the main causes centre around two factors:

- (i) The learner's first language background, i.e. the psychological concept of transfer from the first language, which they believed greatly affects the learning of a second language because it is completely built on it to such an extent that it can tell us nothing more general about language learning,⁽¹⁾ and secondly,
- (ii) The learner's age, i.e. the older the learner the less capable he becomes in his ability to learn a second language.

Indeed, if we want second language teaching to be made more successful and the efforts spent on the teaching of

(1) S. M. Envin-Tripp, "Is second-language learning like the first?" TESOL Quarterly, Vol. 8, No. 2, June 1974, p. 112.

second languages to become more fruitful, the theoretical foundations of this belief together with the methodological procedures based on it have to be re-examined in the light of the new findings of the related interdisciplinary research. To reveal the limitations of such a belief, we can criticize it on the following grounds:

(i) Focussing mainly on language differences means ignoring many other factors which affect the second language learner's performance, such as, for example, his learning strategies, the role of storage from a prior stage, the training procedures, overgeneralizations of second language rules. Suzan Tripp does not deny the fact that the second language learner makes use of prior knowledge, skills and tactics, but she argues, on the other hand, that the first language learner does this as well.⁽¹⁾ Although first language interference constitutes the largest single cause of errors, yet "the fact that the second language builds on prior knowledge is not what differentiates it from first language learning".⁽²⁾ Selinker's⁽³⁾ concept of "interlanguage" provides a more comprehensive psycholinguistic approach to the errors of the second language learner. It takes into account the psychological aspects of the problem - namely what takes place in the learner's mind. His theory reflects the growing tendency to look at deviant forms, not purely negatively, but as constructive features of language learning. He refers to the learner's speech output

(1) S. M. E. Tripp, op. cit. p. 112.

(2) S. M. E. Tripp, op. cit.

(3) L. Selinker, "Interlanguage", IRAL, 10 (1972) pp. 205-31.

which is invariably different from the second language as "interlanguage".

With regard to the factor of age, the question which arises is the following: "Are the differences due to age?" According to the study conducted by Tripp, the second language learner is not handicapped because of this factor, a point which will be given priority of discussion in the present study from the point of view of both its advantages and disadvantages.

A number of applied linguists who followed another line of research do not broadly confirm the hypothesis of transfer. Depending on psycholinguistic research findings, they have attempted to explore the hypothesis that second language learning is basically similar to first language acquisition, but they did not go very far towards answering the question: "In what ways are foreign adults different or similar to native children?"

Corder, for example, maintains that "it is the circumstances (learner, teacher, and linguistic data) in which learning takes place that are different. It does not necessarily follow for that reason that the processes of learning are different."⁽¹⁾ Dulay and Burt (1971), on the other hand, found that learning a second language could be explained more readily in terms of first language acquisition than in terms of interference from the mother tongue; Natalico and

(1) S. P. Corder, Introducing Applied Linguistics. (England, Penguin Books Ltd., 1975) p. 113.

Natalico (1971)⁽¹⁾ showed that the acquisition of plural inflections by children in a second language followed the same sequence as in first language acquisition; Cook (1973)⁽²⁾ argued that foreign adults repeated sentences in similar ways to native children; Klessner (1971)⁽³⁾ found that bilingual children learnt both languages by progressing from linguistically simple to linguistically complex structures.

Other scholars do not wholly confirm the hypothesis that second language learning is similar to first language acquisition. Politzer (1974)⁽⁴⁾, for example, in his developmental scoring test, showed that the syntactic structures of foreign children did not develop in the same way as those of native children. Moreover, Boyd⁽⁵⁾ (1975) found general similarities between native children acquiring Spanish and foreign children but certain specific grammatical differences. Finding some justifications for the main argument in favour of assuming that language learning (L_2) and language acquisition (L_1) are different processes, Corder maintains that it is based on the assumption that "the language learner is a different sort of person from the infant, that there has been some qualitative change in his physiology and psychology at some point in his maturation process, and that these changes in some way inhibit him from using the same learning strategies that he used as an infant, or make available to him some whole new range of strategies which he did not possess before."⁽⁶⁾

(1), (2), (3): Quoted by V. J. Cook, op. cit., p. 1.
 (4), (5): Quoted by V. J. Cook, ibid., p. 1.
 (6): S. P. Corder, op. cit., pp. 113-114.

On the basis of these results which all in all establish both similarities and differences in the two processes, Cook maintains that the two processes are similar in one way or another to baking a cake and baking a loaf of bread which may utilize the same process but acquire different ingredients, oven temperature and cooking time.⁽¹⁾

A review of relevant literature reveals that there is only a very small number of studies which investigate in depth the problematic issue related to the application and findings on first language acquisition to second language learning. Although the literature on first language acquisition on the one hand and on second language learning on the other hand is quite large and rich by now, a neglect has long prevailed in the field of researching in this important area of the inter-relationship of the two learning processes: "It has taken surprisingly long for scholars of language learning to envisage the relation between first and second language learning, and to review theories of the human acquisition system as having a bearing on what they study (Cook, 1973; Corder, 1967; Selinker, 1972)⁽²⁾. Emphasizing the same point, Corder states that "there has been no lack of people who predicted that there would be nothing to learn from a study of language acquisition which would be of relevance to language learning."⁽³⁾

The lack of a completed study devoted to this important field and the absence of sufficient previous research may be

(1) V. J. Cook, op. cit., p. 1

(2) S. M. E. Tripp, op. cit. p. 111.

(3) S. P. Corder, op. cit. p. 109.

mainly due to the belief held by scholars that the differences between the two processes are so deep that it is difficult to envisage the relation between them. Tripp finds two main reasons for this belief which lie firstly, in the differences in research style, and, secondly, in the theoretical rationale offered for treating first and second language learning as irreconcilably different. For example, with regard to the differences in research style, from the point of view of purpose, method and focus of the respective research traditions, she finds that, firstly, while the research on second language acquisition has generally been applied in purpose, and has until recently been light on basic and general theory; writing on child language has been more theoretical, and research has been less applied. Secondly, while child language research, for nearly a century, has used the case study as its primary method, with focus on stages of development to various cases, second language learning studies normally are of large groups, with statistical pooling of information so that the individual acquisition patterns are less visible.

Thirdly, while research on child language has focused so heavily on learner strategies that the input to the learner was, until recently, almost completely ignored, research on second language learning has paid primary attention to manipulation of the structure and presentation of teaching materials. Fourthly, while research on child language has been limited to the natural settings where language is learnt, but not taught as a by-product of communicative needs, research

on second language learning has almost entirely occurred in classrooms, where language is taught formally and where language structure rather than communicative intent is the focus of attention.

In order to arrive finally at a much broader knowledge of the learning system than is now available, the search for a common theory to account for and explain the properties of the language acquisition system is a "must". New insights are needed based on a more comprehensive theoretical base to help make the interaction of first and second language acquisition processes to be clearly seen in an unclouded, clear way.

The present study is intended as a contribution to further investigation in this area of mounting interest: speculating on a possible common theory of the two learning processes (L_1 and L_2) which must consider among other things:

- (i) the search for a possible compromise to help maintain the balance between two important factors in the two learning processes, since the mentalist's attitude contrasts sharply with that of the empiricist;
- (ii) a reassessment of the theoretical rationale offered for treating first and second language learning as irreconcilably different, particularly in view of the conflict of opinions with regard to this issue. Some psychologists and linguists such as Stern, Jacobovits, Ausubel, and Dunkel, for instance,

hold the view that second language learning processes are, in many ways, different from those of first language acquisition.⁽¹⁾ Others make a strong claim that some of the strategies adopted by the learner of L₂ are substantially the same as those by which a first language is acquired. Littlewood makes a strong claim that the communicative process itself possesses common dimensions, whether the final output is in L₁ or L₂. "Any 'communicative' approach to foreign language teaching must constantly recognize that there is no such thing as the foreign language speaker as opposed to the first language speaker. The latter does not undergo metamorphosis when he begins to speak a foreign tongue, but takes with him his same strengths and weaknesses, his same skills and habits, which may help or hinder him in all stages of the communication process."⁽²⁾

Cooper⁽³⁾ also emphasizes this point by saying that "there is little evidence that the actual learning processes differ for the child and the adult". Corder on the other hand expresses a rather cautious attitude towards this issue, stating that the learners' utterances show evidence of a dynamic system similar to that of a child acquiring his mother

- (1) Cf. H. H. Stern, "First and Second Language Acquisition". Perspectives on Second Language Teaching (Toronto: Ontario Institute for Studies in Education, 1970) p. 64.
D. P. Ausbel, "Adults Versus Children in Second Language Learning: Psychological considerations, Modern Language Journal 48 (1964) 420-24.
H. B. Dunkel, Second Language Learning (Boston: Ginn, 1948) Ch. 2 & 5.
- (2) W. T. Littlewood "Communicative performance in language developmental contexts", IRAL.XVII, 2, May 1979, p. 136.
- (3) R. L. Cooper, "What do you do when you learn a language", TESOL Quarterly 4 (1970) pp. 303-14.

tongue and may, at least to some extent, follow the same sequence of stages." (1)

Although Richards warns us to be careful not to be over-optimistic, in the present state of our knowledge at least, about the relevance to second language teaching of studies of first language acquisition (2), the conclusion reached by Wagner-Gough though tentative, reveals the necessity of an early exposure to a second language through a process that is intended to mirror as much as possible the learning of a first language. (3) Burke's suggestion seems plausible, however, since he suggests that if by the end of the comparison the adult L₂ learner has appeared to be qualitatively the same kind of learner as the child, "... then we prescribe for the adult (or more correctly provide the conditions in which he can prescribe for himself) the diet, in content and sequence, that the child prescribes for himself - with those modifications added which allow for his adulthood." (4)

Drawing a close comparison between the two processes seems inevitable therefore in order to help us to know whether second language learning appears to draw on skills and processes

- (1) S. Pit Corder, "Language continua and the interlanguage hypothesis," in S. P. Corder & E. Roulet (eds.), The Notions of Simplification, Interlanguages and Pidgins and their Relation to Second Language Pedagogy. (Genève, 1977) p. 13.
- (2) J. C. Richards, "Error analysis and second language strategies", in J. W. Oller & J. C. Richards (eds.), Focus on the Learner: Pragmatic Perspectives for the Language Teacher. (New York: Newbury House Publishers, Inc., 1975) p. 130.
- (3) J. D. Wagner-Gough: Comparative Studies in Second Language Learning. M.A. Thesis, University of California, Los Angeles, 1975.
- (4) S. J. Burke, op. cit., p. 66.

similar to those available during first language learning. Such a comparison will eventually help develop a common theory which will be of great significance for manipulating the functional, social and structural circumstances in which learning occurs, and for having a much broader knowledge of the learning system than is now available.

CHAPTER ONE

The "How" Question:

A Psychosociolinguistic Insight
into Language Development and
Second Language Learning

CHAPTER ONE

The "How" Question: Nature-Nurture Debate: Some Critical Remarks on Current Approaches and Suggestions for an Alternative, New Approach: The 'Four-Factor Theory

Introduction:

The Nature-Nurture Debate

The "why" question in both L₁ acquisition and L₂ learning seems, comparatively speaking, more obvious to the investigator than the "how" and the "what". The latter are two of the greatest imponderables of current cognitive psychology, and furnish the most valuable material for study⁽¹⁾. Wasserman states that "As a rule scientists refrain from asking "why" questions, but ask "how" questions, since they aim to explain how various classes of mechanisms could account for various classes of behaviour."⁽²⁾

In his book, Introducing Applied Linguistics, Corder uses the analogy of the L₂ learner as a data-processing machine like a computer into which data are fed. He regards the materials of language teaching as the input or the potential input, stressing the necessity, therefore, of distinguishing between what is available for putting in and what the machine will actually take in. Out of this, he states, comes the need for a better understanding of the process of language and

(1) See: B. L. Derwing, "Is the child a little linguist?" in J. Macnamara (ed.), Language Learning and Thought, (New York: Academic Press, 1977) p. 86.

(2) G. D. Wasserman, Neurobiological Theory of Psychological Phenomena (London: The Macmillan Press, 1978) p. 157.

acquisition. For "without a much broader knowledge of language learning and acquisition we do not know what parts of the material that the learner is "exposed" to he can actually make use of at any particular stage of his learning process." (1)

Macnamara points out that it is difficult to say what we learn when we learn a language (semantic and grammatical categories), let alone to specify the learning process. "... I think it is fair to say that the core of the process still eludes us." (2) Emphasizing the same idea, Derwing stresses the point that "what we lack is the crucial ingredient: the facts. We do not know very much about the kinds of rules actually learned by speakers and actually used by them in the production and perception of speech. In fact, we do not know how to go about looking for answers to this last question ..." (3)

The main reason for the ambiguity in this respect and consequently for the absence of a comprehensive L₁ and L₂ acquisition research is associated with the fact that a large number of simultaneously varying and interacting factors have an effect on certain types of learning. While Jakobovits (4), for example, distinguishes three main language learning factors: (i) instruction, (ii) learner, and (iii) sociocultural, he recognizes eleven variables, four which he

(1) S. P. Corder, Introducing Applied Linguistics, (England: Penguin Books Ltd., 1975) p. 133.

(2) J. Macnamara, "The cognitive strategies of language learning," in J. W. Oller & J. C. Richards (eds.), Focus on the Learner (New York: Newbury House Publishers Inc. 1975) p. 58.

(3) B. L. Derwing, op. cit., p. 82.

(4) Quoted by M. S. Echeverria "On needed research in second language learning in the light of contemporary developments in linguistic theory" IRAL, Vol. XII, 1, Feb. 1974, p. 73

classified under the instruction factor: (a) quality of instruction, (b) opportunity to learn, (c) transfer effects and (d) criterion evaluation (achievements, etc.), and four more variables under the learner factor: (a) ability to understand instruction, (b) aptitude, (c) perseverance, (d) learning strategies. As for the socio-cultural factor, the following three variables have been mentioned by him: (a) language loyalty, (b) linguistic composition, and (c) biculturalism.

Dulay⁽¹⁾, on the other hand, distinguishes between what he calls (i) the linguistic complexity factor and (ii) the learning complexity factor, and regards the psycholinguistic learning strategies as a function of the interplay between these two complexity factors.

It is for such reasons that there are still basic uncertainties about the nature of the processes of both L₁ acquisition and L₂ learning, and hence a lack of an overall balanced study which can give due emphasis to the interaction of variables. Admitting the fact that there are in reality so many matters which are open to question and debate, Dulay makes it clear that in the field of L₁ acquisition, for example, "we are all, in one way or another, grappling with the problem ... of searching for the rules of mental organization that limit the class of possible hypothesis a child uses when learning a language."⁽²⁾

- (1) C. H. Dulay, "Goofing: An indicator of children's second language learning strategies", Language Learning 22, 2, 2972, p. 242.
 (2) C. H. Dulay, ibid. p. 243.

A study of this sort, which hopes to overcome some of those difficulties, demands a multi-disciplinary approach. This is because, undoubtedly, the problem of studying language acquisition and language learning cannot be solved from an exclusively linguistic point of view, but only in its complete context of linguistic presentation and pedagogical embedding. In view of the fact that language has three main dimensions: (i) the linguistic dimension, (ii) the sociological dimension, and (iii) the psychological dimension,⁽¹⁾ a one-sided approach in studying its acquisition or the way it can best be taught cannot be totally comprehensive.

A psychosociolinguistic approach, however, can enrich our understanding of the language acquisition process and help clarify to a certain extent the ambiguity which still exists. Such an alternative approach widens the perspective since it takes into account the communicative skills and does not confine itself to elucidate the nature of the "grammatical competence" of the native speaker. Kiparsky, among others, has argued convincingly that "the 'clever' linguistic analysis is not necessarily the psychologically valid one".⁽²⁾ The interdisciplinary approach which is adopted in this study hopes to pave the way for further study to develop pedagogical and psychological theories which pursue in depth the different factors involved.

(1) See: S. P. Corder, op. cit., p. 27.

(2) Quoted by B. L. Derwing, op. cit., p. 81
see also: S. P. Corder, op. cit., p. 92.

Indeed, the point should be emphasized that any research in language learning which tries to incorporate developments of linguistic theory has to be sensitive to the possible interactions of variables not yet quite understood.

To raise the question of the specific relevance of the discussion of first language acquisition for an understanding of second language learning and teaching implies accepting the fact that teaching a language is always built on a theoretical base which interprets in certain ways the process involved in first language acquisition. Depending on that interpretation language can be taught by "conditioning" drills, explicit explanation, elementary 'data processing' procedures, etc. The objectives of this chapter are, therefore, first to outline briefly the main tenets of the prevailing approaches which have interpreted the process of L_1 acquisition in two different ways; to examine the current application of these two approaches in the field of L_2 learning in order to draw the right conclusions as to whether or not they can come up with good, satisfactory answers to the baffling problem that besets researchers today: the "How" question; then, to suggest a plausible, more comprehensive approach as an alternative which can be said to encompass the many variables involved.

Nature-Nurture Debate in L₁ Acquisition

Briefly speaking, knowledge concerning the 'how' question of L₁ acquisition, from the beginning of interest in the study of the process of L₁ until the present time, has been obtained from two broad sources often contrasted as nature and nurture. Earlier literature on L₁ acquisition represented by the Standard Structuralist Behaviourist Approach put strong emphasis on the role of the environment. Recent literature places the burden of language acquisition on the innate factor. Such conflict represents the long-standing philosophical dispute between 'empiricists' and 'rationalists', which is still going on.

The Standard Structuralist Behaviourist Approach, in its extreme form, assumes that the innate factor is not that of language learning ability but a general learning ability, i.e. that the child is born with the mechanisms and procedures for the acquisition of knowledge, the child's mind otherwise is a passive organism (a blank slate or a tabula rasa) responsive to the reinforcement conditions provided by the environment. The child brings to the task this innate learning ability, its maturing motor mechanisms and its needs and the environment takes care of the rest. The approach attaches great importance to the vast amounts of mimicking and practice, and large numbers of stimulus-response reinforcement situations to help make the gradual process of language acquisition a sort of habit-formation.

Jakobovits gives very briefly a general characteristic of the overall approach by saying that the process of acquisition is from "surface to base"; that is, "the knowledge represented by language learning at all levels - phonological, semantic, syntactic - was entirely based on the relations contained in the overt speech of the parents".⁽¹⁾

The objections to Structuralist-Behaviourist views are now well-established. In a well-documented review of B. F. Skinner's Verbal Behaviour in 1959, Chomsky made his first attack on radical behaviourism in which he revealed its inability to account for the fact that language simply is not a set of 'habits' and is radically different from animal communication.⁽²⁾

This new approach reverses the order and places the burden of acquisition on the child with relatively little importance attached to the environment as a reinforcing agency. Kiparsky observes that since it is quite clear that the child, unlike an adult learning a second language, cannot use explicit rules and exercises - at least in the critical pre-school years - and benefits little from what adult guidance it may be offered, his acquisition of language is therefore "an individual act of creation".⁽³⁾ He calls the child the "synchronic linguist par excellence" because he learns his mother tongue in complete ignorance of its history.⁽⁴⁾

- (1) L. A. Jakobovits, Foreign Language Learning: A Psycho-Linguistic Analysis of the Issue. (Rowley: Newbury House Publishers, 1971) p. 2.
- (2) See: J. Lyons, Chomsky (London: Fontana, 1970) p. 14.
- (3) P. Kiparsky, "Historical linguistics" in J. Lyons (ed.) op. cit. pp. 302-314.
- (4) P. Kiparsky, ibid. p. 302.

To account for the child's ability to acquire such a complex linguistic repertoire in a relatively short period of time, Chomsky speculates on a possible language acquisition device (LAD). The device functions as a whole but is ordered and programmed in some, as yet, largely inexplicable way. Its programming, however, must be such that it contains language universal information but no information specific to any one language.

According to this approach, the child seems to act, in one way or another, like a little linguist who in his efforts to achieve the ultimate goal of full competence, that is, a form of cognitive patterning, uses a large number of linguistic abilities. He tests out his ability to make and operate judgements on grammaticalness, deviance, synonymy and paraphrase relationships in order to understand and produce an infinite number of well-formed sentences.

To view the acquisition process from the perspective of generative grammar, it is necessary to point out that according to this theory a human being's language equipment is inborn rather than learned. It is therefore claimed that only a minimum of language input from the environment is necessary for normal linguistic development, since the so-called linguistic universals are innately represented in the human nervous system and articulatory apparatus. The theory attaches more importance to the language acquisition device (LAD), which represents a set of strategies and principles

that allow the child to figure out from the language data around him what the rules of his grammar are. This is not a random trial-and-error procedure but a highly systematic one which consists of linguistic universals. Macnamara points out that "language learning device is so remarkable in man, and one of the main tasks of linguistics and psycholinguistics is to make a systematic assault on it".⁽¹⁾

Representing an extremist attitude, McNeill, for example, devalued the role of linguistic input stating that it does not matter greatly which kind of linguistic input the child is exposed to, as long as it is a natural language, because as LAD receives a certain amount of linguistic data it will scan it for distinctions that match the distinctions drawn in the universal hierarchy of category. "Because LAD is exposed to a natural language, some of the universal distinctions are bound to be present. Thus, we can imagine that whenever LAD observes such a distinction in the preliminary linguistic data, it is incorporated into LAD's own version of the underlying grammar. The function of preliminary data, therefore, is to give LAD a basis for selecting among various universal distinctions."⁽²⁾

McNeill's following model is simple in design; it reflects a lack of focus on exactly what the corpus or input entails, a central issue which will be given considerable attention in the present study.

(1) J. Macnamara, op. cit., p. 58.

(2) D. McNeill, "Developmental psycholinguistics", in F. Smith and G. Mill (eds.) The Genesis of Language (Cambridge: MIT Press, 1966) p. 49.
See also: E. H. Lenneberg, Biological Foundations of Language (New York: Wiley, 1967) p. 27.

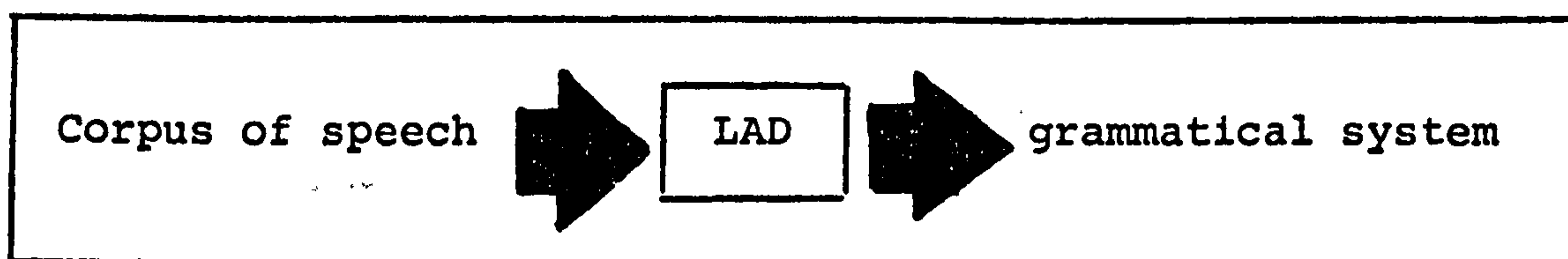


Figure No. 1: McNeill's model of an abstract
"Language Acquisition Device".

It is worth noting that while some linguists and psycholinguists suggest that the human infant is born with a specific generally determined, language learning capacity; others, more cautious in their view, propose that the ability and predisposition to acquire language is a function of the general cognitive capacities of the human being which enable him to learn at all.

Criticism of the Innateness Hypothesis in L₁ Acquisition

The most interesting question to turn to here is whether the recent proposals emerging from the transformational generative fold comprise a more enlightened, more accurate interpretation of the situation than that offered by the Standard Structuralist-Behaviourist one. Do we now have a more effective approach to language teaching? This is still an open question.

From the linguistic and psycholinguistic point of view, it is still believed that the innateness hypothesis has not given a fully adequate characterization of the structure of the child's innately endowed "language acquisition device", the nature of its universal categories and their interrelations. Jakobovits puts it as simply as this: "Someone is bound to point out that one does not explain the why of a complex phenomenon by saying that it is innate." (1)

The nurture role is not insignificant in the acquisition process. This point is not denied, however, by the naturalistic approach. The present study while supporting the innateness hypothesis hopes to go some steps further towards emphasizing the idea that the role of the environmental factor is not merely significant but that in the absence of adequate nurture, development would fail, or more specifically, as Olson puts it "... the acquisition of speech would not be possible." (2) Individual differences constitute a support

(1) L. A. Jakobovits, op. cit., p. 11.

(2) W. C. Olson, Child Development (Boston: D. C. Heath and Company, 2nd edition, 1959) p. 18.

to the nurture role in its interaction with that of nature's. While first language studies generally neglect individual differences, a careful examination of first language data may show individual differences to be important as it is the case in the field of L₂ learning where such individual differences are of considerable significance. The effects of such factors as personality, interest, motivation, and tendencies to engage in language play, in enhancing or limiting the children's ability to use social opportunities for learning and using the language, seem to be of greatest importance in determining such differences. These are not merely cognitive factors yet they play their role in affecting the cognitive process.

In an article entitled "Is the child a little linguist?", the author argues that it may be probable that the urge to acquire communicative competence is perhaps stronger than that of acquiring linguistic competence, in the sense that the child does not act as a linguist in his search for the rules of the language. "It is hardly obvious that the child ever sets out to learn a 'language system' at all, ..." (1) His use of his mother tongue reflects a tendency to communicate effectively rather than to go about finding the linguistic rules as such in order to use language creatively. "... it is a category mistake to believe that children attempt to learn language per se. They are strongly motivated to learn to communicate ..." (2)

(1) B. L. Derwing, op cit., p. 80

(2) B. L. Derwing and W. J. Baker, "The Psychological basis for morphological rules", in J. Macnamara (ed.), Language Learning and Thought (New York: Academic Press, 1977) p. 85.

Commenting on a productive strategy followed by the child to acquire linguistic competence, Elgin implicitly refers to the role of three factors in the acquisition process:

(i) imitation (environmental), (ii) social interaction (cultural), (iii) the cognitive aspect of acquisition which manifests itself in "rule-governed" behaviour. The fact of the matter seems to be that the child uses his "communicative competence" presumably by imitation as a first step and after that his cognitive ability helps him deduce the linguistic rules to acquire "linguistic competence":

One of the most interesting things about that is that often a child who has at an earlier stage used the irregular past forms of verbs correctly will, upon having internalized the rule about -ed, suddenly switch to the incorrect forms. (1)

This communicative urge to communicate is explicitly expressed by Derwing, who emphasizes that "children are powerfully motivated to find any and every means to express themselves. Language provides one of the easiest and most flexible means to this end. Thus why they learn seems quite clear ..." (2)

By way of conclusion, Burke points out that Transformational-generative grammar cannot yet account for language competence, and it is not concerned more than marginally as yet with those additional aspects which make up performance.

- (1) S. H. Elgin, What is Linguistics? (New Jersey: Prentice-Hall Englewood Cliffs, 1973) p. 62.
 (2) B. L. Derwing, "Is the child a little linguist?" in J. Macnamara (ed.), Language Learning and Thought (New York: Academic Press, 1977) p. 86.

"The theory, of course, may well be correct both overall and in detail but perhaps some essential simplicity has been missed." (1)

A recent investigation by Filmore (2) of the social and cognitive aspects of second language learning in young children in a naturalistic setting reveals important findings about the role of imitation and social interaction in the process to which the Transformational theory did not give enough emphasis. The observation that the learners in the study were able to use the new language in meaningful social settings long before there was evidence of 'rule acquisition' in their speech supports a reversal of the usual view of the language learning process. Instead of learning grammatical rules first and then generating sentences based on them, it was found that the learner, largely by way of imitation, adopts some way of speaking first; next, he figures out the principles by which the utterances he already knows how to use are structured; and only after that, he begins to create novel utterances of his own. The writer came to the conclusion that it may be necessary to reject the usual assumption of child language research according to which the utterances a child produces are taken as evidence on the nature of his current system of generative rules.

One of the main contributions of this study is therefore to prove the hypothesis that the social aspects of the language

(1) J. Burke, op. cit., pp. 65-67.

(2) L. W. Filmore, The Second Time Around: Cognitive and Social Strategies in Second Language Acquisition. Ph.D. Thesis (Sanford University, 1976).

learning process, be it L_1 , L_2 or L_3 etc., which is typically ignored in acquisition research, are intricately involved with the cognitive aspects. In other words, the success or failure of the learner's efforts depends in good part on his ability to establish and maintain social contact with the people who could give him the input and the contexts he needs for learning the language. His success, in short, depends not on cognitive skills alone, but also on the constant interaction between them and the social skills that enable him to participate in the situations in which the language is used. Furthermore, the neuroaffective variable is given no less emphasis than the social since without adequate self-involvement in the acquisition process no proper learning takes place.

Granting the innateness hypothesis, which is mainly based on the observation that any normal child, regardless of his genetic, or 'racial' characteristics, will acquire the language of the community in which he is brought up, we are still left with the task of explaining why children of immigrants sometimes fail to achieve a 'native' command of the language of the country in which they have lived since birth. A case such as this gives a clue to the correlation which exists between heredity and environment. Lyons finds the explanation for the case of the children of immigrants to be sought "in sociological, rather than genetic terms: they have not been fully integrated in the community."⁽¹⁾ In the framework of the present study, however, the answer could be found in the constant, complex interaction between the environmental factor

(1) J. Lyons, op cit., p. 11.

provided in the form of stimulation and the innate factor in the form of cognitive capacities which cannot develop without adequate stimulation. The study hopes to prove the point that the potentials hereditarily possessed can only be fully developed in a context of environmental stimulæ and the constant interaction between them both.

For the development of a more adequate, comprehensive theory, the following guidelines are suggested by Campell and Wales:

"The proper course to adopt in the investigation of language acquisition is to specify first the nature of the linguistic environment, and thus identify the possible sources of information available to the child about his language, and then to discover, presumably by experimentation, which of these possible sources are used. When that has been done, and not before, it will be time to speculate about the genetic contribution of the individual to language acquisition."⁽¹⁾

The present study will view the process of learning from the perspective of a totality approach which interprets the process in terms of the inevitable constant interaction among four basic factors: the cognitive, the environmental, the cultural and the neuroaffective.

(1) See R. Campell and R. Wales, "The Study of Language Acquisition", in J. Lyons (ed.) op. cit., p. 257.

Nature and Nurture Debate in the Field of L₂:

The L₁ = L₂ Hypothesis: the Notion of a Critical Period

Now in the field of L₂ learning, the relative positions of the Structuralist-Behaviourist approach and the Transformational-Generative approach to second language learning and teaching are partially derived from their respective interpretations of the acquisition process. Despite the fact that there were plenty of ideas about the 'how' question in the process of second language learning for many years, serious attempts to understand the process on the basis of empirical research took place only recently, i.e. in the last ten years or so. Recent studies of first language acquisition, together with the generative linguist's conception of 'language', have been the main factors leading to the questioning of the kind of interpretation given by the Structuralist approach about the 'how' question of L₂ learning. In its extreme form the structuralist approach reflects the assumption that the differences in the processes involved in acquiring rote learning in human beings and in animals were more quantitative than qualitative. When this assumption was applied to the learning of languages by human beings, it led to the application in the classroom of kinds of exercises for second language learners based on the idea of stimulus and response and had, therefore, a drill-like quality.

The conventional theory of second language development which is built on the Structuralist approach assumes that learning a second language can best be achieved by building

it up rule by rule. By observing the similarities between the two processes of first language acquisition and second language learning in a natural setting, investigators came to realize that there is no analogy between the conventional theory and second language development. This realization, together with other factors raised the need for new assumptions concerning the "how" question in second language learning.

Contemporary linguistic theory can best be understood, therefore, as a reaction to linguistic Structuralism. It has emerged as an answer to the search for explanations which Structuralism could not give. Structural Linguistics, which reflects behavioural psychology, is considered incapable of accounting for the most basic features of human language. The focus of current research centres around issues such as the following: the creative aspect of language use, the central notions of linguistic competence and linguistic performance, rule-governed behaviour, underlying structure, etc.

Despite the differences in the two approaches, some similarities still exist. Both approaches stress the importance of an authentic language teaching model, for example. Both hold that the learner's exposure should be as complete and extensive as possible. Both see value in contrastive analysis, though there are differences of emphasis and de-emphasis in both cases with regard to this issue.

Although the formal descriptive techniques of the Structuralist approach are not completely discarded, its basic

tenets in the field of second language teaching have been questioned since they are found to be closely bound to surface linguistic analysis and reinforcement theory.

A main objection raised against the conventional theory of second language teaching has been that the L₂ student must follow a different process from that followed by the child. He is not allowed to experiment with the target language or make mistakes. Rivers says "... in the audio-lingual method, the student must not, as the infant does, experiment with new combinations and analogies, some accurate and some inaccurate. Instead he must be induced to produce the right response by the teacher's careful arrangement of the circumstances of response. His mistakes are not "cute" but dangerous, in that they represent decremental, not incremental learning."⁽¹⁾

The two processes involved appear to be quite distinct, for whereas the process of first language acquisition is based on (i) a series of evolving hypotheses formulated by the child, (ii) a linguistic input provided by adults which is not graded systematically and (iii) the idea that patterns weigh more heavily than frequency of repetition, Second language development is seen by the conventional theory to be based on: (i) building up the language rule by rule (with no errors allowed), (ii) providing a highly restricted and systematically ordered linguistic input which consists of solely grammatical sentences and carefully restricted situations, (iii) stressing

(1) Quoted by V. J. Cook, "The analogy between first and second language learning", IRAL Vol. VII, 3, August 1969, p. 209.

the idea of overlearning and practice to automatize grammatical habits, (iv) depending largely on contrastive analysis which highlights the differences between the two languages, creating in this way new sources of interference.

The new kind of applied linguistics which is developing adopts an approach which assumes that the language learning capacity in the adult and in the child is qualitatively the same. The linguistic theory which such an approach is based upon concentrates on principles of the following type:

- (i) The learner plays an active role in the language learning process by subconsciously internalizing a grammar of the language to which he happens to be exposed;
- (ii) the learner has to be exposed to the full range of grammatical structures;
- (iii) situational rather than grammatical cohesion is required: language should be learned in context.

This emphasis on the role of the learner led to the belief held by those who share essentially this approach to state that: "The main control the teacher needs to exert over the materials to be studied is that they be graspable as usable items by the learner. The language learning capacity of the student will take care of the rest."⁽¹⁾

Such an approach is a reflection of the theories of the innateness hypothesis which - though powerful - have not escaped criticism.

(1) See: L. Newmark and D. A. Reibel, "Necessity and sufficiency in language learning", IRAL, VI, 1968, p. 161.

Indeed a criticism of this sort to the transformational-generative proposals concerning linguistic competence and innateness does not mean that they should be lightly discarded since they incorporate powerful explanations of great significance. Burke, however, while strongly defending the degree of endeavour which such proposals reflect, calls for a "cautious and imaginative" synthesis as an alternative on the ground that "the problems both practical and theoretical associated with these proposals preclude the possibility that they should now form - exclusively - or even primarily the basis of a new approach to language teaching".⁽¹⁾

The fact that there are three interrelated aspects involved in language: (i) syntactic encoding and decoding, (ii) automatization, and (iii) cognitive ability, language learning must therefore be considered as the development of cognitive structures or the assimilation of new into already cognitive structures and the automatization of language behaviour through sufficient time and practice. Lieberman⁽²⁾ points out that there is no distinction between automatized skills and cognitive ability, but that all automatized skills have underlying cognitive structures. Language is no different in this respect, it is an automatized skill like dancing, skiing or driving a car. Contemporary research in this field emphasizes the importance of an approach which, in reconciling the two theories of language learning, can contribute to the building up of a new theory for language learning. James refers to this need when he says:

(1) S. J. Burke, *op. cit.*, p. 67.

(2) Quoted by J. James, "Language Transfer Reconsidered", *ISB* Vol. 2, 3, 1977, p. 14.

"One must conclude that language learning involves more than mere cognitive assimilation or development of 'competence'. This discrepancy could be resolved if the two positions of language learning as habit formation and the development of knowledge of a certain kind (competence) were not considered irreconcilable."⁽¹⁾

Emphasizing the need for a psychological theory which helps explain language as a process and the psychological states or operations that language user knows or executes when he produces or understands a sentence, Derwing points out that:

"... We have no psychological theory at all - just a "generative grammar" or "competence model" which, beyond the simple description of language output, embodies no particular factual claims about who knows what. Unless or until these issues are satisfactorily dealt with, therefore, I simply fail to see how such theories can be of any possible scientific interest or use."⁽²⁾

In the light of all the points mentioned above which reveal a conflict of opinions with regard to many issues such as, for example, the underlying assumption of the two approaches which are contradictory in revealing similarities or dissimilarities between the two processes L_1 and L_2 ; and again, in the light of the dispute in explaining the 'how'

(1) J. James, op.cit., p. 14.

(2) B. L. Derwing, op. cit., p. 83.

question in the field of L₁ acquisition itself, further investigation concerning the 'how' question in these two areas of L₁ and L₂ acquisition is urgently needed. Cook says that "only further research will show whether (this) conventional theory is wrong or whether the two processes do, in fact, develop in a similar manner."⁽¹⁾

The task of exploring in this area with the purpose of revealing differences and similarities is not an easy task since, "the gap between a child acquiring his first language and an adult learning a second language, at a time when he already possesses "language" is likely to be so big that any direct application of our knowledge is difficult, the more so because our knowledge in the first place is still extremely shaky."⁽²⁾ Take for example the debatable notion of a 'critical period' for language acquisition and second language learning, which is still a source of uncertainty for most investigators in the second language learning field. Some see the only difference between the two types of learner as a quantitative one rather than a qualitative one; others think that the adult is a different type of learner who seems to have lost the possibility of learning a foreign language with native proficiency because of a change in his learning ability.

In a recent paper read before the Los Angeles Second Language Research Forum, Lamendella - after examining the

(1) V. J. Cook, op. cit., pp. 209-210.

(2) R. Ravem, "Language acquisition in a second language environment", in J. W. Oller and J. C. Richards (eds.) Focus on the Learner (New York: Newbury House Publishers Inc., 1975) p. 140.

wide range of factors and variables involved - shows how very oversimplified the question, "Is second language learning like first?" seems to be. He points out that "anyone who pretends that all of these issues can be encompassed in global claims like " $L_1 = L_2$ " or " $L_1 \neq L_2$ " just has not confronted the complexity of the task at hand. Simple straightforward answers can be given only to simple, straightforward questions." (1)

For dealing with this fundamental question of a critical period, Burke puts several questions to the challenge of investigators to attempt to answer: (i) To what extent and in what ways is he different?. (ii) What are the implications of: (a) his being at a later cognitive stage, of: (b) already having a series of concepts, of (c) wishing or not wishing to learn, of: (d) not having that apparently internal compulsion so characteristic of the child from a very early age to point, to want to know names and reasons? He makes it clear that "we have no answer to these and other important questions.." (2)

- (1) J. T. Lamendella, "General principles of neurofunctional organization and their manifestation in primary and nonprimary language acquisition", Language Learning, Vol. 27, No. 1, June 1977, P. 193.
- (2) S. J. Burke, op. cit., p. 65.

A New Insight: An Introduction of a New Theory:

The 'Four-Factor' Theory

The equilibrium of the system of learning and acquisition as a whole, would lead us to propose - as a replacement of the previous approaches - a new concept of four-dimensional, dynamic pattern. The new insight which the proposed 'Four-factor' theory reveals can be said to encompass both the 'one-factor' theory of learning which proceeds from surface to base, and the 'two-factor' acquisition theory which holds a moderate position on the nature-nurture controversy, and which manifests itself in the contemporary functional approaches that are really a continuum rather than a dichotomy of the structural or maturationally-oriented approaches, in the sense that they are composed of the following two steps: (i) the discovery of the underlying structure of language by means of deductive and inductive inferences guided by (a) innate grammatical universals, and (b) sample linguistic data which are sentences and semi-sentences, and (ii) the automatization of the phonological surface transformations of this underlying knowledge through practice. (1)

Taking a cautious attitude on this issue, however, Siegler has shown that the degree of exposure to certain experiences could explain development, but he emphasizes

(1) See: G. J. Whitehurst and B. J. Zimmerman, The Functions of Language and Cognition (New York: Academic Press, 1979)

that the exact ways in which these findings can be applied to explaining development in the natural environment is unclear. "There can be no doubt," he says, "that experience as a whole plays a large part in development taken as a whole, but the question of what types of experience play what types of roles in what types of development remains substantially unanswered."⁽¹⁾

The new theory suggested here goes further, however, to be a sort of 'four-factor' theory which conceives of linguistic development as a very complex process, taking place on four levels simultaneously. In the words of Siegler, this complexity manifests itself in such a way that "if we can imagine children as millipedes, with a thousand legs climbing (a mountain) simultaneously, we may begin to comprehend the true complexity of the process. The position of no one leg can be said to be completely responsible for the millipede's position on the mountain, nor could we reasonably hope that by lifting any one leg up, we could change the millipede's overall position."⁽²⁾ The 'four-factor' theory puts primary emphasis for the accomplishment of all this complicated task on the affective and cultural variables in their constant interaction with the cognitive and environmental variables. Such an interaction is so vital in any language learning process be it L₁, L₂ or L₃ etc. that it has to come to the scene and be given its due emphasis. It designates the complex product of maturation (nature's design) and nurture (needs and requirements for development).

(1) R. S. Siegler, "Children's thinking: The search for limits", in G. J. Whitehurst and B. J. Zimmerman, op. cit., p. 106.

(2) R. S. Siegler, ibid. p. 110.

The present study does not, of course, view the learner as a simple passive creature modelled exclusively by external forces; it is rather a study which while giving him his true value as he progresses through self-contained stages to create his own language by moving through his own experiences, cannot but give great emphasis to the fact that it is impossible in isolation, i.e. without a constant interaction with the social forces with which he interacts on the levels of his innate cognitive and affective capacities as an individual.

Within the framework of this study, therefore, mastery of a first or second language is a complex process which is the function of constant interactions between cognitive and affective variables internal to the learner on the one hand and cultural and environmental variables external to him, on the other. In other words, both L_1 and L_2 processes are characterized as processes of a developmental continuum revealing the effects of both internal and external factors along which the child or the adult comes to maintain the consistency of his linguistic input. A support of this statement comes from Guiora et al., who point out that:

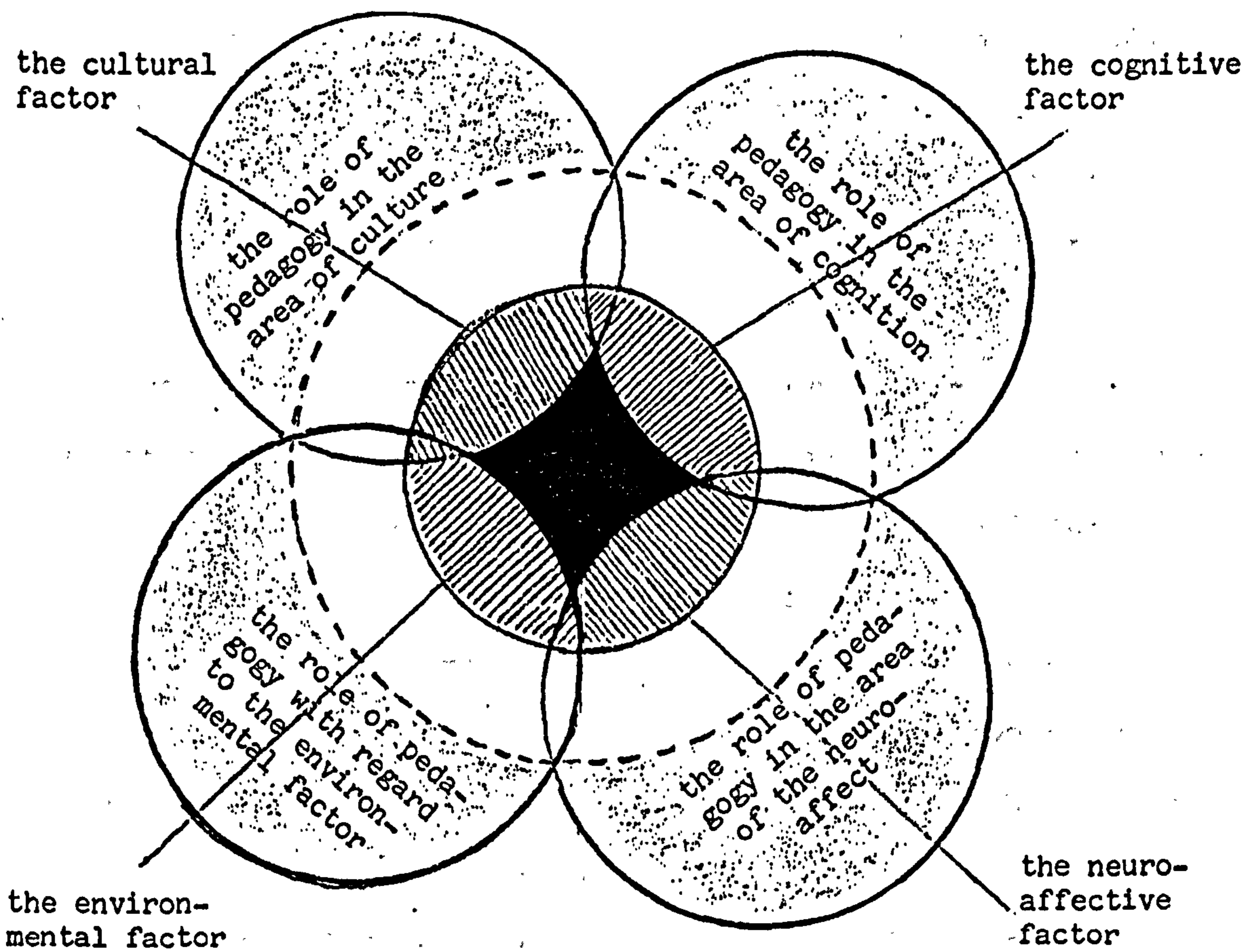
"The suggestion that mastery or loss of a first or second language is a complex process, in which cognitive and affective variables internal to the speaker are interwoven with cultural and environmental variables external to him, may sound obvious. Nevertheless, such




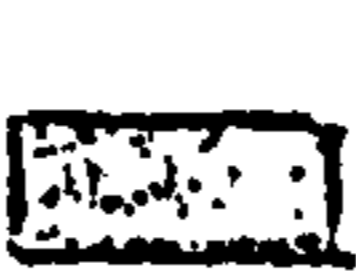
a probability is frequently overlooked in linguistic and psycholinguistic research." (1)


In fact, the application to language learning of the idea that language acquisition and language learning are products of complex interaction of both internal and external variables instead of just being looked upon as merely a matter of processes proceeding from base to surface or from surface to base is an issue which has certain consequences of great importance in terms of language teaching. The 'four-factor' theory suggested here is a contribution towards solving the problem of the controversy as to whether language acquisition or language learning is accomplished by an internalised or a learned system of rules. This theory may, therefore, lead to significant insight in second language learning.

The present study views the processes of L_1 and L_2 learning as circular in character and are, therefore, better represented by a diagram such as the following:

(1) A. Z. Guiora et. al., "Language and person: Studies in language behaviour", Language Learning. Vol. 25, No. 1, 1975, p. 53.



-  area of differences peculiar to children
-  areas of similarities
-  areas of differences peculiar to adults
-  the role of pedagogy in L₂ teaching

The 'black' area in the middle of the diagram represents the area of advantages peculiar to the child in his L_1 acquisition. The unshaded area is that peculiar to the adult. It can be, as it will be explained later on in this chapter, an area of advantages and/or disadvantages. Internal factors in terms of motivation and type of personality and external factors in terms of the positive role of pedagogy help in making it an area of advantages. The last chapter, the role of pedagogy in L_2 learning, will be concerned in elaborating this notion. The overlapped area  represents the similarities between the two processes upon which the 'four-factor' theory has been built. The circles in the diagram are dynamic in nature rather than static, in the sense that they are subject to continuous change since the two processes are developmental in nature. The 'four-factor' theory does not conflict with present developments in linguistic theory but favours a wider perspective which takes into account more comprehensive principles and several factors affecting language learning.

Broadly speaking, the 'four-factor' theory, on the basis of the similarities investigated in the present comparative study between the two processes, views the first and second language acquisition capacities as innate capacities shared by both children and adults, but attributes the causes of the individual differences found in both cases to several internal and external factors: neuro-affective, environmental,

cultural and cognitive. These factors affect the rate at which both first and second languages are acquired and the effectiveness with which the two languages are used. Variations in general language aptitude and general intelligence, in personalities, in motivation and physical health represent some of the most important internal factors influencing the rate of learning and acquisition. Experiences derived from environmental and cultural setting and the consequent equality or inequality of the opportunities provided, both in terms of the quality and quantity of such opportunities are some of the major external factors that have a substantial influence on the learning process of both languages.

The main body of the study which has aimed at an examination of the advantages and disadvantages of the adult L_2 learner in comparison with those of the L_1 learner to determine the degree of success with which the L_2 learning process by a grown up L_2 learner in a formal setting can be beset - has come up with the following two primary conclusions. The first is that the adult L_2 learner has two main disadvantages: environmental as well as psychological. The second is that he demonstrates two major advantages, manifested in his psychological, mental attributes of cognitive maturity and greater memory capacity. Unfortunately, however, these advantages can easily be distorted by linguistic pedagogical factors (syntactic complexity, or faulty presentation of the L_2 grammatical system), and affective factors (a marked falling

off of intellectual enthusiasm and flexibility). It seems evident, then, that so far as his innate capacity to learn L_2 he is hindered by these factors from approximating the L_2 system in the same efficient way that the young L_1 learner succeeds in doing. A comparatively brief analysis of these points will follow.

(i) Disadvantages of the adult L_2 learner in a formal situation:

(a) Environmental disadvantages

With regard to the external factors, it is an obvious fact that the L_1 environmental setting is much richer in many respects than that of the L_2 setting in a formal situation, and it therefore constitutes one of the major advantages of the L_1 learner over the adult L_2 learner. The question which raises itself here is this: "If by any chance the L_2 environmental setting could be manipulated in such a way as to resemble to a certain extent that of L_1 , would the adult L_2 learner prove to be as efficient a learner as the L_1 learner is?" To put it in another way, if the external variable could be effectively manipulated, would the so-called 'critical period' hypothesis prove to be entirely false? Macnamara goes so far as to claim that "we cannot prove that adults are less skilled in language learning unless we give them opportunities equal to those of the child to learn a language" (1) Since, as he says, no such experiment can be carried on, "for that reason there are almost no grounds for the general fatalism about adults' ability to learn languages" (2)

(1) J. Macnamara, op. cit., p. 63.

(2) Ibid., p. 63.

The 'critical period' hypothesis (CPH) raises more questions than it answers. By suggesting that once language function becomes lateralized, further acquisition is improbable, the CPH does not specify the nature of lateralization and whether it is a genetic predisposition or is the effect of psychological mechanisms, environmental stimulation, or an overlapping influence of all these factors taken together. Macnamara does not support the concept of the 'critical period hypothesis' which postulates that due to neurological development, the adolescent or the adult starts to lose the ability to acquire a second language in a natural childlike way through much exposure to it, without actual formal instruction. He questions the value of its belief that language learning device atrophies rather early in life, stating the matter clearly that "the evidence of this is dubious, to say the least".⁽¹⁾ Apart from the phonological difficulties of adults which, he says, should not be overemphasized, he finds that "there is no evidence that after adolescence one cannot learn a language as rapidly and as well as a small child".⁽²⁾

Carroll is rather cautious in his view about the 'critical period' hypothesis, for he talks about what he calls "the language aptitude", the major components of which are: (i) phonetic coding ability (identification and storage of sounds), (ii) grammatical sensitivity, and (iii) inductive ability. On such grounds, Carroll states that "Persons with high foreign-language aptitude at puberty and beyond are those

(1) J. Macnamara, op. cit., p. 52.

(2) Ibid. p. 58.

who have for some reason lost little of the language acquisition ability with which they are natively endowed".⁽¹⁾

While recognizing certain broad similarities between the two processes in the sense that both require the capacity to remember and produce sounds, and to acquire and apply grammatical rules, by whatever process, Carroll considers the learning of L₂ after the 'critical period' to be a very different process from the acquisition of the first language, and he, therefore, proposes a somewhat modified theory of language acquisition that would apply to both native and second languages, namely that "while there may be a 'critical period' in the early stages of life, during which the individual has a heightened capacity to learn any language (be it native or foreign), there are individual differences in the degree to which this capacity declines, and that these individual differences are, in effect, differences in foreign language aptitude".⁽²⁾ Carroll recognizes that this position is speculative and calls for more longitudinal studies to confirm it.

It is interesting to note here that there can be a positive effect gained from the experience of language learning, since it helps develop in the learner of more than one language considerable communicative competence, with its wide range of formation and speaking rules for language. According to Corder, this now widely-believed hypothesis that

- (1) Quoted by W. M. Rivers, "Language learning and language teaching - any relationship?" in W. C. Ritchie, (ed.) Second Language Acquisition Research 1978, p. 203.
- (2) Quoted by W. M. Rivers, ibid. p. 203

learning several languages facilitates the learning of new languages seems probable, though it has not yet been investigated scientifically.⁽¹⁾ Cook, on the other hand, believes that the adult's previous knowledge of a language can be both an advantage and/or a disadvantage, explaining the point in the following way:

"The second language learner already knows the potential of language and can go straight on to discovering how that potential is realized in the second language. Partly this gives the second language learner an advantage since he is already aware of what language is. Partly, however, it puts him at a disadvantage since he may not be aware which parts of his knowledge are about "language" and which are about "a language". He may not just assume that languages are all the same in general terms, but that they are the same in specific details. Hence the problem of 'interference'.⁽²⁾

Corder's assumption⁽³⁾ that the learner of some other second language will incorporate the grammar of that language into the device to make the new task easier is confirmed by the cross-cultural study on L₃ acquisition by Lococo. The study arrived at the conclusion that "the assumption that strategies used in L₃ acquisition are the same as those of

- (1) S. P. Corder, Introducing Applied Linguistics, p. 113
 (2) V. J. Cook, "Cognitive processes in second language learning", IRAL, 15, 1977, p. 12.
 (3) S. P. Corder, op. cit. p. 135.

L₂ acquisition proved to be correct.⁽¹⁾ The speculation which James, among others, arrives at is that someone learning his first foreign language will probably make different types of mistakes than someone who has already learned many languages".⁽²⁾

Lamendella believes that it is unreasonable to attempt to extrapolate the critical period for primary language acquisition (PLA) to non-primary language acquisition.⁽³⁾ Although Penfield and Roberts (1959), Lenneberg (1967) and Scovel (1969) all made the claim that adults do not have the same potential as children for learning foreign languages; however, neither Penfield nor Lenneberg presented neuro-pathological evidence for the loss with age of some abstract "language learning ability" that would entail the loss by adults of a capacity to learn second languages. The neuro-pathological evidence cited relates only to the capacity for PLA, and most of it relates only to the disruption of already acquired language functions. Apart from the gradual loss with advancing maturation of cerebral "plasticity" and "adaptability", neither Lenneberg nor Penfield presented any evidence that the adult in possession of a primary language does not have the capacity to acquire second languages. Lenneberg was merely repeating the widely-held conviction that children are able to acquire foreign languages more easily than adults. Since no structural atrophy of neural

- (1) V. Looco, "A cross-sectional study on L₃ acquisition", Working Papers on Bilingualism, No. 9, 1976, p. 61.
- (2) J. James, "Language transfer reconsidered", ISB, Vol. 2, No. 3, 1977, pp. 12-13.
- (3) J. T. Lamendella, "General principles of neurofunctional organization and their manifestation in primary and non-primary language acquisition", Language Learning, 27, 1, June, 1977, p. 175.

systems has taken place in the language systems of normal adults, and, since many adults clearly can reach high levels of second language competence, it is not legitimate to talk about a critical period in this context.

The interesting findings of Selinker et al. in connection with the discovery of the hypothesis of interlanguage as a common characteristic of both adult learners and young children (seven-year-old) learning a second language when the setting of the second language acquisition is non-simultaneous and when it occurs in the absence of native speaking peers of the L₂ - proves that Carroll's claim about a 'critical period' in the early years of life which makes children more capable of learning a second language than adults cannot be easily accepted.⁽¹⁾ This is a further proof of the importance of the environmental stimulation and the functional communicative approach to language, in conjunction with the disguised influence of the affective factor which is almost always involved in any communicative act.

Teacher input data with the concentration it puts on the acquisition of structural rather than communicative competence has a somewhat negative effect on the effectiveness of the L₂ learning process in certain types of learner.

Whether the limited second-language experience in the classroom can develop near native-like communicative and

(1) See: L. Selinker et al., "The interlanguage hypothesis extended to children", Language learning, Vol. 25, No. 1, 1975, p. 140.

structural competence together with a relatively high degree of fluency that comes as a result of automatization is a question which remains to be answered by teachers themselves, depending on how skilful and motivated they are in their teaching tasks and on whether they are more communicatively than structurally oriented to meet the common instinctive need of most of their L₂ learners.

The present study puts high emphasis on the role of environmental stimulation, the nature and intensity of which condition cognitive development to some high extent. This does not mean, of course, that complete native-like competence is possible after the L₁ system has become well established, neither does it mean that pedagogy is enough to surmount all obstacles and barriers: biological and environmental; but it can to some extent control methods of instruction, attitude, motivation, and other affective variables.

(b) Psychological disadvantages

Evidence from the present study for the gradually decreasing abilities in second-language learning by adults in a formal situation shows that the incompleteness of the adult L₂ linguistic system has a psychological basis, and therefore concomitant cognitive correlates, and that the differences in the learning skills between the L₁ and L₂ learners are mostly a function of the cognitive maturity versus immaturity rather than of different language learning processes, with the biological affective factor playing an influential role which carries over its effect on to the cognitive factor as will be

explained briefly below and in more detail in Chapter II:
 "The Cognitive Factor", Section II.

Despite the advantage involved in being at a more advanced stage of cognitive ability and the presence of previous skills in approaching new learning situations and tasks which facilitate the acquisition of meaning in the L₂, the adult L₂ learner's strategies in attacking the new task are seen to form a psychological block to learning, for they depend on a rationalistic rather than on a part-scanning approach which gives no way to guessing, to trial-and-error processes, to learning by intuition, to make predictions, to flexibility in using imaginative thought instead of relying mostly on logical operations. His ability to go through the same stages as the child is hindered by his advanced stage of rationalization. This point is confirmed by Taylor's remark that "it seems likely that affective psychological variables may constitute the major reasons why adults are not always as successful as children in language acquisition".⁽¹⁾ Evidence from Gardner and Lambert (1972), Guiora (1971) and Aida (1971) indicates that affective factors may actually function independently of factors such as aptitude and intelligence.⁽²⁾ Terrell's conclusion tends to confirm this hypothesis, for he asserts that "the evidence at this point indicates then that the primary factors which influence L₂ acquisition are affective not cognitive".⁽³⁾ Ausubel's comment on the likelihood that

(1) Quoted by T. D. Terrell, "A natural approach to second language acquisition", The Modern Language Journal, Vol. 61, 1977, p. 328.

(2) Quoted by T. D. Terrell, op. cit., p. 328.

(3) T. D. Terrell, op. cit., p. 328.

adults may suffer from what he calls 'emotional blocks' with regard to particular subject-matter areas and their marked falling off of intellectual enthusiasm is not irrelevant here, since it confirms the effect of the affective factor on learning. The most relevant and the most interesting findings in this respect that highly support the present study's investigation which hypothesizes that the major difference between the adult L_2 learner and the child L_1 learner is closely connected with age and its consequent cognitive/affective characteristic at certain stages of development - are those of Cummins.

Cummins⁽¹⁾ stresses the point that linguistic difficulties faced by young children learning a second language, such as inadequate command of the L_2 or interference between L_1 and L_2 are likely to have a greater effect on the child's expression of his intelligence at the formal operational than at the concrete operational stage. He gives one possible explanation why so little cognitive retardation has been observed in the early grades of immersion schooling, an explanation which is similar in nature to the present one discussed in this study, i.e. when there is no logical reasoning, the process goes smoothly and unconsciously, because the stimulus-response process is closely and primarily connected with the association of non-linguistic routines with their associative cognitive routines which consequently lead to easy assimilation of the linguistic routines. When rationalization starts to develop,

(1) J. Cummins, "Cognitive factors associated with the attainment of intermediate levels of bilingual skills", The Modern Language Journal, Vol. 61, 1977, pp. 3-12.

there is a shift of emphasis from the concrete to the abstract, i.e. from the non-linguistic routines to the linguistic routines where the cognitive development becomes more dependent on the mediation of language as an abstract, symbolic entity. Cummins explains how in the early grades, the child's interaction with the world, and consequently, his cognitive development is less dependent on the mediation of language than at later grades. "This," he says, "may give the child a "breather" in which he can overcome the initial difficulties with language and gain the second language skills necessary to benefit optimally from interaction with an increasing symbolic environment."⁽¹⁾ Cummins confirms his explanation by referring to Piagetian theory which assumes that "as the child approaches the formal operational stage, linguistic symbolism becomes more useful as a means of representing cognitive operations".⁽²⁾ During the period between concrete and formal operations, because of the development of logical thinking, language as a symbolic behaviour, is likely to increase in importance as an instrument with which the child can operate on his environment and express his developing cognitive knowledge. If the child has attained a high level of competence in the L₂ at the concrete operational stage which he has unconsciously assimilated, then his interaction through that language with an increasing symbolic environment is likely to promote optimally or positively influence his cognitive processes and academic progress.

(1) J. Cummins, op. cit., p. 11.

(2) Ibid, p. 11.

Campbell believes that "loss of awareness may be as important for acquisition as growth. People who wear inverting spectacles stay on the bicycles just as long as no-one asks them whether they see the world the right way up or not!" (1)

If, on the other hand, the child has attained only a certain minimum or threshold level of competence in his second language, then bilingual performance may negatively influence the development of his cognitive processes. Thus, the result of Cummins' investigations and those of others, indicate that:

"Under certain learning conditions, access to two languages can positively influence the development of cognitive processes." (2)

On the basis of such findings, it can be stated that when the manipulation of learning conditions takes place, then, there is no ground for the belief or the common sense notion that "becoming bilingual, that is, having two strings to one's bow or two linguistic systems in one's brain, naturally divides a person's cognitive resources and reduces his efficiency of thought. Instead, one can put forth a very persuasive argument that there is a definite cognitive advantage for bilingual over monolingual children in the domain of cognitive flexibility." (3)

- (1) R. N. Campbell, "Cognitive development and child language", in P. Fletcher and M. Garman (eds.), Language acquisition (New York: Cambridge Univ. Press, 1979) P. 436.
- (2) J. Cummins, op. cit. p. 3.
- (3) W. E. Lambert, "Culture and language as factors in learning and education", F. R. Eckman (ed.), Current Themes in Linguistics, 1977, p. 30.

(ii) Advantages of the adult L₂ learner

Kennedy indicates that the older second-language learner may have certain factors in his favour which in part counter-act the disadvantage resulting from missing an early start.⁽¹⁾

The findings of the present comparative study distinguish two major psychological mental attributes of the L₂ adult learner:

(a) He has longer attention span, and a longer short-term memory span, but his greater memory capacity can be easily distorted by the L₂ syntactic complexity due to faulty presentation of grammatical materials. (b) The adult L₂ learner is cognitively more mature, but this asset is usually distorted by 'emotional blocks', and a marked falling off of intellectual enthusiasm and flexibility.

(a) His memory capacity

Some experimental evidence suggests that adults are better than children in some aspects of the language learning process. Smith and Braine found adults are superior in the acquisition of miniature artificial language, while Asher and Price (1967) found adults superior at deciphering and remembering instructions given to them in the second language.⁽²⁾ Kennedy explains that the L₁ learner uses short sentences partly because of his limited memory and processing capacity, which is not equal to the adult-sized memory capacity. The adult, he says, has a longer attention span, and longer short-term memory span.⁽³⁾ The efficiency of this

(1) G. Kennedy, "Conditions for language learning", in J. W. Oller and J. C. Richards (eds.), Focus on the Learner (New York: Newbury House Publishers in., 1975) p. 75.

(2) J. Macnamara, op. cit., p. 64.

(3) G. Kennedy, op. cit., p. 54.

short term storage of the learning process which holds the material to be learned initially and briefly is an asset in language learning, for it allows a better storage of information. When heavily overloaded with information or complexity, however, the short-term memory span is more likely to impede the learning process than accelerate it or keep it going. In discussing spoken language problems of dyslexic children, Denckla refers to this issue of the rate of learning and its psychological impact, especially with regard to those children who process language slowly, pointing out that:

"As is the case when one overloads a circuit with too many appliances, the entire circuit is broken and all appliances on that circuit will not operate. Thus, excessive information load can lead to total lack of comprehension of everything the teacher has said."⁽¹⁾

(b) The adult L₂ learner is more cognitively mature

Perhaps one of the most significant advantages of the adult L₂ learner over the child L₁ learner and which distinguishes him as a different kind of learner is that he is at a later stage of cognitive development than the L₁ learner.⁽²⁾ This raises the question of what difference this cognitive advantage makes to the L₂ learner. Ausubel et al. find that

- (1) M. B. Denckla, "Minimal brain dysfunction", in J. S. Chal: and A. F. Mirsky (eds.), *Education and the Brain* (Chicago University Press, 1978) p. 260.
- (2) See: V. J. Cook, "Cognitive processes in second language learning", IRAL, XV, Feb. 1977, p. 12.

children's cognitive immaturity and lack of certain intellectual skills preclude many approaches that are feasible for older age groups, and that highly significant changes in cognitive readiness take place as a result of the learner's mastery of his native language.⁽¹⁾ Having already mastered the basic vocabulary and syntactic code of one language, the L₂ adult learner is more capable of comprehending and applying formally stated syntactical propositions. He, therefore, approaches the L₂ with the mechanism of an L₁ system already fixed in his thought.

In the case of the L₁ learner, the development of language and that of the cognitive capacities in general are interrelated and closely overlapped. For reasons of incomplete cognitive maturation, children face certain difficulties in their understanding and acquisition of some kinds of linguistic devices. For example, some researchers have shown that children as late as nine years of age find it more difficult to process sentences in which the logical actor-acted upon relationship does not coincide with the subject-object relationship (passive and active sentences). Similarly, comprehension of the linguistic devices used for comparing quantities has been shown to be significantly affected by the conceptual categories of equality, superiority and inferiority.⁽²⁾

The L₂ learner's more advanced stage of conceptual development gives him the asset of having a larger range of

(1) D. P. Ausubel et al., op. cit., p. 75.

(2) G. Kennedy, "Conditions for language learning", in Oller and Richards (eds.), op. cit., p. 75. 69

communicative functions for which he can employ language - a factor that has undoubtedly some effect on his learning and performance in his L_2 , in the sense that his learning could be facilitated because he would be on the look-out for elements of similarities between the L_2 and his previously acquired L_1 with regard to both the horizontal and vertical structures of the two languages. He, therefore, operates on the level of a double-language experience which may give him more flexibility in thought, more flexible manipulation of the linguistic code.

Generally speaking, Ausubel finds that adolescents and adults have a tremendous advantage over children in learning, because "the cognitive organization of children differs mainly from that of adults in containing fewer abstract concepts, fewer higher order abstractions, and more intuitive-nonverbal than abstract-verbal understandings of many propositions".⁽¹⁾ In all other respects, he finds that children's learning of new verbal material can proceed in much the same manner as in adults. To build up abstract concepts and propositions, the child needs longer time, for he needs concrete-empirical experience since he has a smaller number of higher-order propositions in his cognitive structure. The adult's overall ability to function at the abstract level of logical operations enables him to move through the concrete intuitive phase of intellectual functioning very rapidly and thus to separate easily linguistic symbols from their referents. While this is regarded as

(1) D. P. Ausubel, op. cit., p. 250.

an asset by a number of investigators because it can facilitate easy assimilation of rules and structure, it is at the same time believed to be a hindrance to the automatization process which is as significant in language learning as that of the reasoning process. James, for example, believes that the cognitive maturity of the adult L₂ learner while it can facilitate easy assimilation of particular structures and rules, it creates on the other hand, an even greater discrepancy between knowledge and the ability to use it. The possession of cognitive structures by the adult L₂ learner may lead to the consequence that competence errors will occur for a short period, but this he says occurs at the expense of automatization which requires a particular time factor, with the result that automatization may lag behind.⁽¹⁾ This phenomenon manifests itself when examining samples of speech acts produced by an L₂ learner, and comparing them with samples of his writing on the same topic. Some mistakes which appear in speech but not in writing could give a clue to the interpretation of this phenomenon. In the case of writing, the L₂ learner has at his disposal more time to form his ideas and express himself; he, therefore, does not make many competence errors - an indication that he has internalized the grammatical rules of L₂. In speaking, however, where continuity of speech is essential and where fluency is desired, such errors can easily 'creep in', due primarily to a lack of practice rather than to a lack of knowledge.

(1) J. James, op. cit. p. 15.

CHAPTER TWO

The Cognitive Factor in the
Realm of the Affect:
Differences and Similarities
in L₁ and L₂ learning processes

CHAPTER TWOThe Cognitive Factor in the Realm of the AffectIntroduction:

It has been shown in Chapter I that the mentalistic or rational theories of language assert that humans are innately equipped with the capacity for deep-structure and that the process of acquisition is, therefore, based on reasoning rather than on memorization or imitation. In addition, the behaviourally-oriented theories argue that the child's eventual realization of the transformational quality of language is acquired gradually as a result of progressive experiences, in which memorization and imitation play a significant role. Taking into account these divergent points of view and the controversy over this basic issue of reasoning versus memorization and imitation, the present chapter and the ones that follow take up these general questions about the actual process of acquisition - how children and adults learn their first and second languages, what complexity is involved, and what processing strategies they bring to language. Do they merely imitate what they hear, or do they form and test different hypotheses about what they have heard? In other words, are the processes ones of memorization or ones of reasoning, or a combination of both?

These questions are basic enough that they form the foundation upon which the various sections of this chapter will be constructed. In the framework of the present study, however, no single approach seems ideal; it will, therefore,

be argued that these two major mechanisms are interlocked and play an active role in the two processes. Each mechanism could, in fact, provide the next step in the complex processes of both L_1 and L_2 learning, influenced to a great extent by the affective factor.

It has been stated that the two processes of L_1 acquisition and L_2 learning could now be approached as a problem of cognitive learning.⁽¹⁾ The term "cognitive learning" refers to how an individual gets to know or understand the language. Knowing is commonly referred to as "cognition", a continual change defined in the dictionary as "the process of knowing or perceiving, the act of acquiring an idea".⁽²⁾ This is the meaning of the term in general. Applied to the field of language learning, it is taken to refer to how an individual seeks meaning: how he tends to acquire meaning from the context in which he finds himself.⁽³⁾ According to Lenneberg, "a subject who has learned to use a word correctly has learned to deal with the world in a prescribed way (to conceptualize the world). He or she has learned to perform certain cognitive operations on potentially available data ..."⁽⁴⁾

The fact that language is a means of knowledge transmission, that it requires the development of a system of

- (1) S. P. Corder, "Error analysis, interlanguage and second language acquisition", Language Teaching and Linguistics: Abstracts, Vol. 8, No. 4, 1975, p. 203.
- (2) See: I. E. Sigel and R. R. Cocking, Cognitive Development from Childhood to Adolescence: A Constructive Perspective. (New York: Holt, Rinehart & Winston, 1977) p.
- (3) See: R. E. Baecher, "Bilingual children and cognitive style analysis", in A. A. Simoes, Jr. (ed.) The Bilingual Child (New York: Academic Press, 1976, p. 47.
- (4) E. H. Lenneberg, "Problems in the Comparative study of Language", in R. B. Masterton et al. (eds.) Evolution, Brain and Behaviour: Persistent Problems, 1976, p. 205.

signs and symbols, illustrates how the language communication system is inextricably bound to the 'knowing' or cognitive process and how language and cognition are closely interrelated. Generally speaking, the world we live in is a world of meaning. Everything we perceive has meaning. Rowe points out that "the fundamental attribute of human beings is that they create meaning. Not to do so is impossible, even when we know that there is no way that we can prove the truth of the meaning that we create".⁽¹⁾ The individual comes to understand the meaning of the messages in a mode as a prerequisite to understanding the symbol system of one's group. A central question in this context which should be raised is how the L₂ adult learner achieves this end.

Arguments concerning language learning abilities in the adult on the analogy of those of the child are used inconsistently in different studies and by different researchers. Palmer, for example, in his investigation of whether the innate cognitive forces which were operative in the case of the acquisition of our first language are available for the acquisition of a second, third or fourth language, asserts - after a detailed discussion and analysis of the relevant possible differences - that:

"No reasonable doubt remains: We are all endowed by nature with certain capacities which enable each of us,

(1) D. Rowe, The Expression of Depression (New York: John Wiley & Sons, 1978) p. 25.

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without exercise of our powers of study,
to assimilate and to use the spoken form
of any colloquial language, whether
native or foreign. We may avail
ourselves of these powers by training
ourselves deliberately to utilize them,
or, having more confidence in our
studial efforts, or for some reason of
special expediency, we may choose to
leave our spontaneous capacities in their
latent state and make no use of them.
We cannot, however, afford to ignore them,
and it would be foolish to deny their
existence." (1)

R. N. Campell gives a warning of the complexity of the task confronting any investigator who attempts to envisage the relationship between language and cognition, stating the matter clearly in his introduction to the subject:
"To explore the relationships between cognitive development and language development is to enter a very dark forest indeed! It is not so much a question of not being able to see the wood for the trees: one cannot even see the trees!" (2)

The stated purpose of this chapter has many implications. It implies that there is a category of behaviour in both processes that we define as the cognitive; that this

- (1) Quoted by N. Newmark and D. A. Reibel, op. cit., p. 230
(2) R. N. Campell, "Cognitive development and child language" in P. Fletcher and M. Garman (eds.), Language Acquisition: Studies in First Language Development (New York: Cambridge Univ. Press, 1979) p. 419.

cognitive factor does not develop mechanically in a vacuum - it comes about over time and through its constant interaction with both internal and external factors. Given the assumption that cognition is a behavioural system, the present chapter and the one that follows will discuss how it develops, point out the kinds of individual and environmental conditions that influence the direction and quality of cognitive development, and show how central a role these factors play in stimulating the cognitive factor to develop a repertoire of information about the linguistic symbol system of both L_1 and L_2 . To put it in other words, according to the proposed 'four-factor theory', the cognitive dimension should be studied in an interactional perspective, i.e. in the context of its relationships with the cultural and the affective dimensions, the way the present study proposes to do.

Before attempting to answer the central question of how the L_1 and L_2 learners achieve linguistic cognitive development and flexibility, however, some assumptions to the conceptual framework of the cognitive process must be stated. It will be shown that these assumptions correspond with the recent findings of many disciplines.

Basic assumptions

- (1) Cognitive process is dynamic and interactional in nature, i.e. cognitive, affective and social development are inseparable and parallel.

To start examining the implications of this assumption that the cognitive process is interactional in nature involves

probing its multi-dimensional components and how they overlap.

Luria while not denying the fact that scientific psychology made considerable progress during the past century and contributed greatly to our knowledge of mental activity, nonetheless states that it has generally ignored the social origin of higher mental processes.⁽¹⁾

It seems, then, that the structure by which a person organizes his world of meaning originates in the baby's interaction not just with his physical environment but, more importantly, in his interaction with other people. The structure develops and changes, transforms through continued interaction with others. The child plays, imitates, talks, learns to read, observes others, thinks about others, contrasts himself with others. The whole process is one where the child is both receptive to others and reaches out to others. As he gets older, the ways in which he interacts with others change but not his desire to be in contact with others. It is therefore true to say that social interaction accounts, in part, for the transition in childhood toward logical thought which occurs during the concrete operations stage.⁽²⁾

The above statements are confined to reflecting the relationship or interaction between the cognitive dimension and the social and cultural dimensions. Rowe refers to the interaction between the cognitive and the affective dimensions

(1) A. R. Luria, Cognitive Development: its cultural and social foundations (Cambridge: Harvard Univ. Press, 1976) p. 5.

(2) See: Sigel and Cocking, op. cit., p. 83.

in the process of cognitive learning in general and in the field of language in particular. He says: "... the division we habitually make between cognition and affect, intellect and emotion, words and feelings, does not accurately reflect what we experience. Our language structure and our feelings, our emotions, are inextricably bound together".⁽¹⁾ He then goes on to say that although we can, in our search for understanding, try to look at language and feeling separately, we need to remember that this is an artificial separation. Cole and Scriber sum up this complex phenomenon of the interrelationship that exists among language, cognition, culture and affect in the following words: "... (language) is at one and the same time a vital social force and an individual tool of communication and thought; it is, so to speak, on both sides of the culture-cognition relationship."⁽²⁾

(2) Thought and language are separable; yet they are closely interrelated.

Adding a further dimension to the belief that intellectual function has a sociological character, Piaget believes that language helps accelerate the rate of progress in the process of the transition from sensorimotor to empirical thinking in the child: "Language becomes the intermediary providing the means by which later concepts and conceptual thinking are furthered."⁽³⁾ Thus, the transition between stages can be attributed in part to the sociological

(1) D. Rowe, op. cit., p. 15.

(2) M. Cole and S. Scriber, Culture and Thought: A Psychological Introduction (New York: Wiley, 1974) Quoted by I. S. Sigel and R. R. Cocking, op. cit. p. 28.

(3) Quoted by I. S. Sigel and R. R. Cocking, op. cit., p. 23.

and individual factors, and in the early years to the advent of language. This view which stresses the integration between language and cognitive functioning accounts for the intimate relationship between the two.

Despite the fact that language and cognition are closely interrelated, i.e. that concepts and thoughts may find their expression in language, however, this is not to say that thought is equivalent to language. This assumption agrees with the findings of Piaget (1959), who views the relationship between language and thought as complex and dynamic. While the mental development of the child helps him to acquire his native language, it is also believed that in his development, his first exposure to a linguistic system also helps to develop his intellect and mental activity. Thus, when a child assimilates language which is a ready-made product of sociohistorical development, he at the same time uses it to analyze, generalize and encode experience: "Language, which mediates human perception, results in extremely complex operations: the analysis and synthesis of incoming information, the perceptual ordering of the world, and the encoding of impressions into systems."⁽¹⁾ Although Weil remarked that "the mind enclosed in language is in prison",⁽²⁾ yet it is through the means of language that a sense of time, of permanence and change, of past and future, etc. is gained. From the work of Piaget and those inspired by him we have come to understand how the realization that recurrences of sets of impressions imply certain permanences

(1) See: A. R. Luria, op. cit., p. 9.

(2) Quoted by D. Rowe, op. cit., p. 10

in external reality coincides with the beginning of language in a young child. "The child who does not acquire this awareness of sameness in flux, this object permanence, does not acquire language."⁽¹⁾

Emphasizing the same idea, Edie points out that "In their designating or pointing function, words enable the speaker to enlarge his life-space and life-time indefinitely. By means of words man can extend his perceptual field. ... It is by the use of language that man takes his distance from the world of lived experience, distinguishes elements in the chaotic flux of experience, and thus experiencing himself as transcending the objects of his experience."⁽²⁾ Such a statement illustrates the affinities between language and cognition and the interdependence of cognitive development and language development.

Campell and Wales⁽³⁾ on the other hand, have made the assumption that although it is difficult to distinguish linguistic from cognitive competence, such a distinction, they emphasize, is an important issue. They point out that the experimental study of children's linguistic comprehension seems to provide an excellent testing of this assumption. In their endeavour to show this important distinction between two kinds of competence, the linguistic and the cognitive, Sigel and Cocking point out that mentioning a word is not a

(1) D. Rowe, op. cit., pp. 12-13.

(2) J. M. Edie, Speaking and Meaning: The Phenomenology of Language (Bloomington: Indian Univ. Press, 1976) p. 156.

(3) R. Campell and R. Wales, op. cit., p. 253.

necessary indicator that the child has a true understanding of the concept.⁽¹⁾ Furthermore, because language can be restrictive by its very organization, we do not know what range of expressive ability the person has.⁽²⁾ On such grounds, it would be erroneous to assume that language and thought are identical. Children may have, for example, a conceptual awareness of the difference between oneness and more than one but not yet have the linguistic rule for expressing the concept.⁽³⁾

In sum, this basic assumption is in agreement with E. H. Lenneberg's that "the separation of human language from general human knowledge is in all but a few marginal instances impossible",⁽⁴⁾ because of the abstract cognitive property of language and what Lenneberg calls the "unity of language and cognition".

The recent attitudes to the question, "which comes first, cognition or language?" tend to be more interactionist, in the sense that while there undoubtedly is some conceptual pre-structuring, the emergence of language has an effect on concurrent and subsequent cognitive development, and vice versa.⁽⁵⁾

(3) The most important forms of cognitive processes - perception, generalization, deduction, reasoning, imagination, and analysis of one's own inner life -

(1) See: I. E. Sigel and R. R. Cocking, op. cit., p. 59.

(2) See: I. E. Sigel and R. R. Cocking, op. cit., p. 26.

(3) See: I. E. Sigel and R. R. Cocking, op. cit., p. 119.

(4) E. H. Lenneberg, op. cit., p. 202.

(5) See: M. Bowerman, "Semantic factors in the acquisition of rules for word use and sentence construction", in D. M. Morehead & A. E. Morehead (eds.) Normal and Deficient Child Language (Baltimore, Md: Univ. Park Press, 1976) pp. 7, 9, 10.

vary as the conditions of social life change and the rudiments of knowledge are mastered.

Major shifts occur in human mental activity as a result of some changes in the conditions of social life. These are not limited simply to an expanding of man's horizons, but involve the creation of new motives for action, the introduction of new content into the mental world of human beings, the creation of new forms of activity thus radically affecting the progress of cognitive functioning and cognitive processes.

Having laid down these three basic assumptions about cognition, it is necessary to start taking a comparative perspective with the aim of revealing points of difference and similarity between the child and the adult from the point of view of the "mental processes" they use to be able to know 'how to mean' via the use of the first language on the one hand, or how to use the second language meaningfully in different situations on the other. The chapter is divided into sections: one deals with mental differences and one with language learning processes. The following section is concerned with the language learning processes, while section II deals with the "mental differences" that come about as a result of the age variable rather than the differences in the learning processes or strategies that have to do with language. It will be shown how the mental age plays its role in the selection of strategies by the adult in such a way that they

can either facilitate or hinder learning. Cook refers to this phenomenon when he states that "it must not be forgotten that even if it is established that foreign adults can learn a second language in the same way as native children learn their first, this is not the same as saying they should". (1)

The present study attributes the differences between L_1 and L_2 learning processes to different psychological processes than to different language learning processes. This confirms Cook's view that "... the more learning depends on general psychological processes, the less similar first and second language learning will be". (2)

- (1) V. J. Cook, "The comparison of language development in native children and foreign adults", IRAL XI, 1973, p. 14.
- (2) V. J. Cook, "Cognitive processes in second language learning" IRAL XV, 1, Feb. 1977, p. 17.

Section One

Language Learning Processes

In this comparative study a distinction has to be made between (i) "language differences" and (ii) "mental differences". With regard to the former, Cook, among others, believes that "At the moment there seems to be no certain evidence to show that adults are different from children in language learning, once the other attributes of the adult such as increased memory span have been cancelled out".⁽¹⁾

The basic issues around which this section is built are the broad similarities in the two language-learning processes. The section that follows deals with "mental differences" and their impact on the learning strategies adopted by both types of learner, since it is believed that it in this area that differences are bound to be found:

"We can ... anticipate finding differences between children and adults that reflect the adult's superior stage of general mental development rather than different processes of language learning."⁽²⁾

The present section, which attempts to reveal some of the major similarities between the two processes of language learning, is based on the following facts and hypotheses; hypotheses still because "the question of the nature of the

- (1) V. J. Cook, "The comparison of language development in native children and foreign adults", IRAL, XI, 1973, p. 28.
 (2) V. J. Cook, ibid., p. 14.

first-language acquisition is just as dark, in fact, as second-language acquisition".⁽¹⁾

- (i) that both processes can be looked upon as creative processes, in the sense that both types of learner are equipped with innate mental mechanisms that guide them in their learning task;
- (ii) both learners apply "learning strategies" and "communicative strategies";
- (iii) both employ similar strategies;
- (iv) both share common developmental patterns.

(i) Creativity in L₁ and L₂ learning:

Comparing the process of L₁ with that of L₂ learning with the purpose of finding out some common similarities between them is a complex task because of the differences in the situation in both cases. The second language learner already possesses language and has more or less developed cognitive abilities. Despite these major differences, however, there is a well-established belief that there is a similarity between the two types of learner. The postulation is that the L₂ learners like the L₁ learners are in a sense "programmed" by their innate cognitive capacities to learn a second language,⁽²⁾ hence the term 'creativity' is coined to refer to this common characteristic of both processes. The term 'creativity' stems from the

(1) R. Lakoff, "Transformational grammar and language teaching", in M. Lester (ed.) Readings in Applied Transformational Grammar, 1973, p. 307.

(2) See: W. J. Cook, op. cit., p. 14.

structure of those mental mechanisms which help the learner organize input by means of formulating certain types of hypotheses about the language system being acquired. Although some recent research indicates a discomfort with attributing much of the learner's progress to internal processing mechanisms and to productive essentially non-imitative behaviour to the neglect of input factors, much of the research supports the position that creativity is an essential factor in explaining the two processes of L₁ and L₂ learning. This aspect of learning is believed to be rooted in innate and universal structural properties of the mind.

Ravem, in his article, "Language acquisition in second language environment", points out that the two processes of L₁ and L₂ learning in a free situation are very much alike, and that the similarities in the developmental sequence of sentence types are in many ways more revealing than the differences: "What is more striking is the extent to which second-language acquisition in an environment where no formal instruction is given seems to be a creative process, not unlike that of first language acquisition."⁽¹⁾

According to Dulay and Burt "first and second language acquisition might fall within a fragment of human creativity, the specific models for each will probably be quite different".⁽²⁾ In the debate over whether language is innate or

(1) R. Ravem, op. cit., p. 144.

(2) Dulay, H. and Burt, M. (Marina), "Some remarks on creativity in language acquisition", in W. C. Ritchie (ed.), Second Language Acquisition Research (New York: Academic Press, 1978) pp. 65-89

acquired, Bruner's orientation is obviously towards the innateness, for he states that: "Language does not simply 'grow out of' proto-phonological, proto-syntactic, proto-semantic, or proto-pragmatic bases. It requires a sensitivity to a sound system, to structural constraints, to referential requirements, and to communication objectives."⁽¹⁾

The firm linkage between the cognitive aspect and the affective and social in terms of the need to acquire language for the fulfilment of the complex needs of the individual at all levels is reflected again in Bruner's following statement which is a continuation of his previous one:

"But these sensitivities develop in the service of fulfilling certain functions - predicting the environment, interacting transactionally, getting to goals with the aid of another."⁽¹⁾

Here again, the interactional nature of the 'four-factor' theory makes it hard to tackle the problem of understanding the nature of the internal cognitive dimension present in both processes without viewing it from the perspective of its interaction with the social and cultural setting on the one hand, and the affective and environmental dimension on the other. This is again because of the fact that language was made possible by address and response, by

(1) J. Bruner, "On prelinguistic prerequisite of speech", in R. N. Campell and P. T. Smith (eds.), Recent Advances in the Psychology of Language (New York/London: Plenum Press, 1978) pp. 189-214

the transaction between the self and others which is resolved in the act of speech.⁽¹⁾ J. and E. Newson, in a paper on the origin of symbolic functioning, stress the importance of 'intersubjectivity' which "draws attention to the general principle that human cognitive understanding arises from a process of negotiation between two or more human beings, and it suggests that it may not be sensible to seek the roots of those shared understandings which constitute human knowledge within the action patterns of any one individual viewed in isolation".⁽²⁾ They conclude that the origin of symbolic functioning should be sought, not in the child's activities with inanimate objects, but rather in those idiosyncratic but shared understandings which he first evolves during his earlier social encounters with familiar human beings who are themselves steeped in human culture.

For convenience of study, however, the present section will attempt to show in what specific ways the human mind mediates input in the hope of finding out more about the cognitive organizer and its monitoring function. A study of the selective language learning processes is in fact as important as the study of the input. This is in line with Ervin Tripp's suggestion that the focus on the input alone without considering the use that the learner is making of such opportunity will not allow an adequate model of language

- (1) See: E. Cassier, The Philosophy of Symbolic Forms. (New Haven: Yale University Press, 1953, Vol. 1) p. 284.
- (2) J. Newson and E. Newson, "Intersubjectivity and the transmission of culture: On the social origin of symbolic functioning." Bulletin of the British Psychological Society, 28, 1976, p. 446.

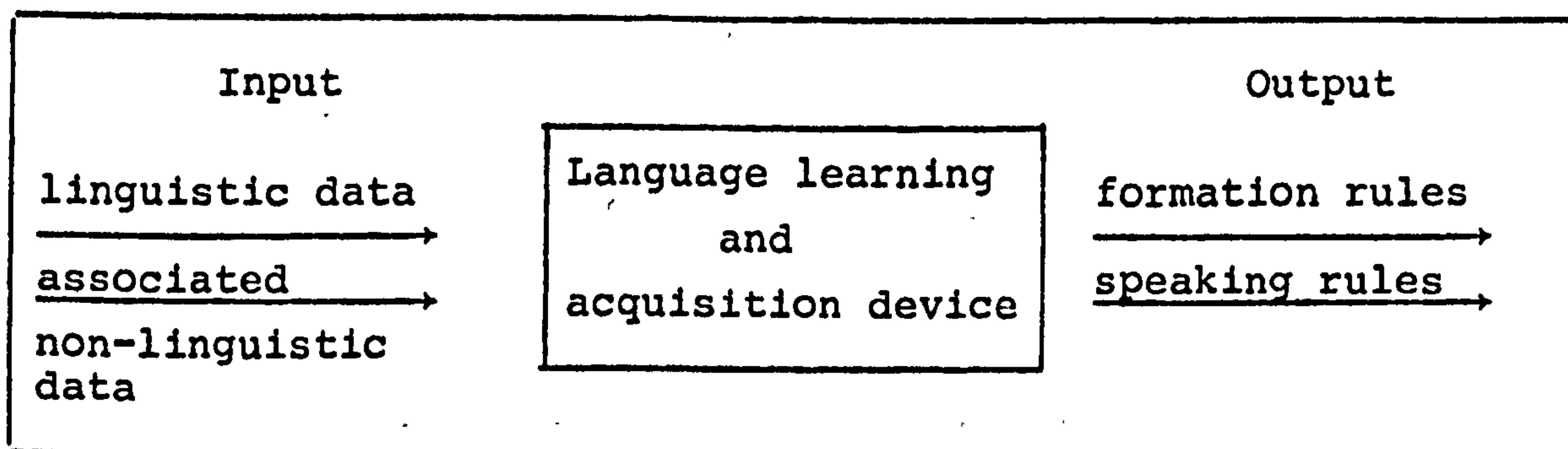
learning. "Any learning model which predicts language learning on the basis of input without regard to the selective processing by the learner will not work, except for trivial problems." (1)

Based on the observation that the child learns generalizations about the language system, generalizations which he can then apply in relatively novel situations which are different from his specific learning experiences, Derwig et al. emphasize the same point, suggested above by Ervin-Tripp, among others, that "the simpler conditioning or association theories of learning have been found to be conceptually inadequate for the productive or creative use to which language learning is put". (2) The writers do not deny, however, that in the process of symbolization or the learning of lexical generalization, for example, association learning of a particular semantic concept with a particular arbitrary phonological shape does take place; yet they find that the learner is still faced with the two processes of differentiation and generalization when allomorphic variation is involved in the task of learning. The first process of differentiation is that which the child has to undergo when he must learn that the same concept has more than one formal manifestation, and the second, i.e. that of generalization is the one he has to go through when he is faced with various forms that he originally construed

- (1) Quoted by J. Rubin, "What the good language learner can teach us", TESOL Quarterly 9, 1, March, 1975. p. 44.
- (2) B. L. Derwig and W. J. Baker, "The psychological basis for morphological rules", in J. Macnamara (ed.) Language Learning and Thought (New York+ Academic Press, 1977) p. 86.

to be morphologically distinct are actually nothing more than alternative symbols of the same concept.⁽¹⁾

Corder's following diagram reveals the general point of similarity that is related to the innate cognitive characteristics of language learning of both L_1 and L_2 learners.⁽²⁾



The diagram does not refer directly to the role of teaching in the field of L_2 learning. However, the 'input' in the diagram which takes the form of 'linguistic data' and 'associated non-linguistic data' can be said to provide an important clue to how teaching should present language in context and not isolate it from the associated non-linguistic routines. Teaching is bound to fail if no consideration of this matter takes place, regardless of how effective the language learning device of the learner may be.

The cognitive factor is clearly represented in Corder's diagram as an influential dimension affecting the two processes of L_1 and L_2 . The main general difference, however, is connected with the fact that while L_1 cognitive dimension

(1) B. L. Derwig and W. J. Baker, *op. cit.*, p. 90.

(2) S. P. Corder, *Introducing Applied Linguistics*, (England: Penguin Books Ltd., 1975) p. 133.

has to do with the acquisition of 'cognitive development', the L_2 cognitive dimension can be viewed as the necessity to achieve what might be termed 'cognitive flexibility'. By 'cognitive flexibility' is meant that the learner should be equipped to operate effectively in diverse intellectual and social contexts, and that he must at the same time retain and develop his cognitive abilities that were fostered by his unique L_1 and community experiences. In other words, his previously learned capabilities, i.e. his cognitive style, affects the learning of L_2 .⁽¹⁾

- (ii) Both learners tend to apply 'learning strategies' (regularization), and 'communicative strategies' (simplification)

From the study of the linguistic forms of both L_1 and L_2 learners, it has now been realized that both of them follow more or less a similar course of development. This similarity manifests itself in the operation of certain cognitive capacities of the two types of learner in the direction of seeking out the most economical path in their complex task of learning the grammatical and the speaking rules of the language concerned. The economical procedure which is used as a strategy for recognizing sentences in terms of a finite set of rules is explained by Corder as "taking up the least possible mental storage space. This means that we must use 'rules' rather than lists. In other words, we do not match the incoming data against some infinitely large set of object-hypotheses, but rather match the 'rules' which could produce the data against

(1) See: R. A. Baecher, op. cit., p. 41.

some set of rules."⁽¹⁾ The interplay between the language complexity factor, the learning complexity factor, and the extra-linguistic factor, however, leads to another strategy of a different kind, i.e. that both the L₁ and the L₂ learners in a free learning situation, after constructing for themselves their own grammar, tend to stretch the application of the limited number of rules which they have acquired to do the maximum amount of work. Both the child and the adult, at the initial stages of linguistic development at least, show this tendency of extending the range of application of certain rules, increasing in this way their generality. According to Richards, this tendency reflects a strategy of simplification.⁽²⁾ To take up the notion of simplification, however, as a "learning strategy" - as many investigators have done - has been objected to by Corder as an incorrect notion. Corder, thus, makes it clear that the two learners employ two separate kinds of strategy: (i) strategies of learning/acquisition, and (ii) strategies of communication: "The one referring to the mental processes whereby a learner creates for himself or discovers a language system underlying the data he is exposed to and the second the devices whereby he exploits whatever linguistic knowledge he possesses to achieve his communicative ends. All speakers, native or otherwise, adopt communicative strategies."⁽³⁾ This latter strategy can well be noticed in the case of L₂ learners in a free learning situation in particular.

(1) S. P. Corder, op. cit., p. 119.

(2) See: J. C. Richards, "Simplification: A strategy in the adult acquisition of a foreign language: An example from Indonesian/Malay," Language Learning Vol. 25, No. 1 1975 p. 118.

(3) S. P. Corder, op. cit., p. 12.

Under the pressure of communication, and in order to give the gist of the message with main concentration on the deep structure rather than the surface structure, the L_2 learner typically begins by constructing general rules which do not account for redundant or unnecessary parts of the grammar, then gradually proceeds to add to the surface complexity of the language. It should not be forgotten, however, that in a classroom situation, the L_2 adult learner does not behave in a similar way to the L_1 learner nor to the L_2 adult learner in a free learning situation, since, unlike them, he is not under the pressure of communication which forces him to give priority to the deep structure rather than to the surface structure. Concentration on the former, i.e. seeking meaning, takes place to a certain extent at the expense of the latter, i.e. learning the surface structure such as the syntactic rules, for example. The simplification phenomenon is the by-product of this mechanism of learning; it is the direct consequence of seeking meaning, and it manifests itself in a number of errors and the interlanguage phenomenon. To avoid making errors, the adult L_2 learner in a classroom situation, with his policy of concentration primarily on the surface structure, consciously tries not to adopt the strategy of the child which would lead to errors. By doing so, he does not extract from the linguistic data the simplest possible rules: the simplest in terms of structural change, and exceptions. This difference in the way a rule is learned by first and second language learners in a formal situation has been explained by Lakoff in the following manner:

"(The child) will do this (extract the simplest possible rule) even if it means speaking sentences quite different from the sentences he actually hears ... It has been observed that children frequently will learn ... the simpler way even though they may never have heard such sentences. But in second-language learning, there seems to be no mis-learning of this sort."⁽¹⁾

According to Lococo's suggestion, the application by the L₂ learners in a classroom situation of the rules of their mother tongue is a kind of simplification in the sense that the L₂ learner tends to omit parts of grammar which he perceives as redundant and unnecessary when his L₁ structure does not require the redundant form. This kind of interference from L₂ is evidenced not in the form of the application of a mother-tongue rule to the target language but in the form of the omission of a particular form. Interference can then be dual: the mother-tongue, as well as the target language pull toward simplification.⁽²⁾

In a free learning situation, the L₂ learner's simplification strategy comes from his keen intention to communicate fluently and more effortlessly. In his discussion of the incomplete application of rules and the systematic difficulty in the use of questions across background languages, Richards

(1) R. Lakoff, op. cit., p. 309.

(2) V. Lococo, "A cross-sectional study on L₂ acquisition", Working Papers on Bilingualism, No. 9, 1976, p. 48.

explains this point quite clearly by observing that the second-language learner, interested perhaps in communication, can achieve quite efficient communication without the need for mastering more than the elementary rule of question usage. Motivation to achieve communication may exceed motivation to produce grammatically correct sentences".⁽¹⁾ Like the L₁ learner he does not follow an exact analytic perception of the content of the sentence, but counts more on intuition, which is a habit of guessing and which is based on a mechanism of trial-and-error. The mechanism of learning by intuition facilitates communication for it correlates in the easiest way possible the linguistic routines with those of the situational or non-linguistic routines. By several repetitions of such procedures on the part of the learner, whether he is L₁ or L₂ learner, the meaning of the linguistic utterances becomes understood. Success in communication plays a role in cognition in addition to repetition.

In the case of the L₁ learner, Guillaum provides us with the following example of learning by intuition which is noticeable when the child replies randomly by a mechanism of trial-and-error to every sort of question, who, what, how:

"If I say to P. (= give to Papa)
referring to a candy he has in his hand,
he gives it to me. If I say to him
(give to Mama), he gives it to me again.
I repeat my order. He puts it in his

(1) J. C. Richards, "A contrastive approach to error analysis" in J. W. Oller and J. C. Richards, Focus on the Learner (New York: Newbury House Publishers Inc. 1975) p. 102.

mouth. Thus there is a nondifferentiation of or lack of attention to the special form of the utterance, a habit of guessing..."(1)

It will be shown in the following section, no. II, that this strategy of the L₂ adult learner in a formal situation which is different from that of the L₁ learner is a result of maturation and mental age with the rationalization process that accompanies it and which consciously or unconsciously attempts to protect the mature L₂ learner from making a fool of himself by producing errors that resemble those of the immature. The strategy of avoidance confirms this psychological state of mind on the part of the adult L₂ learner, and it will therefore be dealt with in more detail in the following section.

Another common strategy which is employed in language production by both L₁ and L₂ learners in a free learning situation reveals a choice of a device in how to use words and in which words they use to convey a particular meaning to communicate their ideas. Such a strategy also depends on stretching their limited number of words to talk about many different situations, and can therefore be regarded as a sub-strategy of 'simplification' according to Richard's above-mentioned definition of the term. In fact, both learners are often faced with wanting to talk about things for which they have no words or no adequate surface structure. Stretching

(1) P. Guillaum, "First stages of sentence formation in children's speech", in L. Bloom (ed.), Readings in Language Development (New York: John Wiley & Sons, 1978) p. 135.

their limited resources to the utmost helps resolve the problem. By employing these production strategies of using a small number of general purpose verbs and 'stretching' words already known or partly known, both learners become more capable of talking about many things for which they have not yet acquired the appropriate vocabulary or surface structure. Their language use is, therefore, transitory in nature, in the sense that it serves to communicate what they want to convey on that occasion only. As they learn more about deep and surface structures, their production strategies gradually come to match or to approximate the adult's or the native speaker's. The generality of this production strategy is not confined to adult L_2 learners but shows up in the learning of a second language by children as well. Clark points out that "children acquiring English as their second language appear to use the same production strategy as native speakers for talking about actions: they rely on a small number of general purpose verbs".⁽¹⁾ In the early stages of acquisition and learning, where the resources are still very limited, these devices play an important communicative role; they help L_1 and L_2 learners to talk about: (i) a large number of different actions through the use of a fairly small number of general purpose verbs, (ii) about objects by using general deictic words or 'stretching' words already known, and (iii) about locative relations in space by making use of general purpose locative markers. Clark gives an example of the employment

(1) E. V. Clark, "Strategies for communicating", in Child Development (Vol. 49, No. 4, Dec. 1978) p. 957.

of such a production strategy to talk about spatial relations, by children acquiring English, who often pick a schwa (ə) sound or a syllabic n (ŋ) as their general purpose locative marker and simply "insert it before any main phrase denoting a location",⁽¹⁾ and who adopt the use of the commonest general purpose verbs such as do and make to talk about actions, and rely on the use of general purpose deictic words like here, that, or look accompanied by pointing to talk about objects. At the pre-linguistic stage, native children typically rely at first on deictic gestures: "they gaze intently and point at whatever interests them. In the absence of words, this strategy seems to work well enough."⁽²⁾ Lenneberg points out that a rather small total vocabulary seems to suffice to make reference to the entire world of the child. The number of words is increased by letting the semantic fields of the already existing words shrink.⁽³⁾ Because the cognitive phenomenon of differentiation has not yet fully developed, the child tends to rely on the strategy of simplification, making the semantic field of each word very large, undefined, and general in use. The selectivity in the usage of animal names, for example, is easily seen in the finding of Nelson and Bonivillian that 370 (94.1%) of the children's total production of 393 animal names were given to 3 animals among the experimental concepts. In an example of similar selectivity, names of vehicles and 'wheeled things' were applied predominantly (86.9%) to 4 objects the investigators

(1) E. V. Clark, op. cit., p. 955.

(2) E. V. Clark, op. cit., p. 953.

(3) E. H. Lenneberg, op. cit., pp. 209-210.

used in their experiments that either rotated or included wheels in their construction. (1)

The child gradually refines the semantic realms of the words acquired. What becomes refined in the course of differentiation are the essential relations that help to make the semantic field more exact, more explicit and more relational. According to H. H. Clark and E. V. Clark, young native children depend on the strategy of simplification for three different hypothesized reasons: (i) limited articulatory skill, (ii) limited representational ability, and (iii) limited memory span.

The first hypothesis seems somewhat more plausible to the writers, for they believe that even when children have found out how to pronounce a particular segment or sequence of segments, it may take them months of practice before their articulation becomes automatic, (2) and thus allow them to progress developmentally towards successive approximations of the phonological system of their L_1 .

In the framework of the present study, automatization is as essential in learning both L_1 and L_2 as learning by reasoning is - an important point which indicates that the innateness hypothesis is insufficient to account for all the complexities of language acquisition. With regard to the young child's limited representational ability, it

(1) K. E. Nelson and J. D. Bonvillian, "Early language development: conceptual growth and related processes between 2 and 4½ years of age", in K. E. Nelson (ed.) Children's Language (Vol. I, 1978) p. 512.

(2) H. H. Clark and E. V. Clark, Psychology and Language (1977) p. 401.

results in what is called child-based representations, that is, since young children are unable to represent complicated sequences of sounds or words, they therefore store simplified representation, close to their own pronunciation of the adult word.⁽¹⁾ The third hypothesis that has to do with the young children's limited memory span compared with older children and adults, such a hypothesis proposes that a mental deficiency of this sort makes it difficult for children to keep the whole adult word in mind as they try to say it. "This explanation," H. H. Clark and E. V. Clark point out, "has also been offered to account for the apparent limits on utterance length: why children start with single words and only gradually work up to utterances of two words or more."⁽²⁾ Because the child can remember less than the adult, he, therefore, adopts the strategy of simplification manifested in repeating only the last few words he has heard when he is faced with a sentence that exceeds his memory capacity.

While Corder believes that a second language learner can scarcely be said to be simplifying the rules of the second language in any psychological sense because "we cannot simplify what we do not possess"⁽³⁾, James⁽⁴⁾ on the other hand, argues that the strategy of simplification on the part of the L₂ learner is due to lack of automatization and competence: "Because he does not know a rule completely or its

(1) H. H. Clark and E. V. Clark, op. cit., p. 401.

(2) H. H. Clark and E. V. Clark, op. cit., p. 401.

(3) S. P. Corder, "Error analysis, interlanguage and second-language acquisition", Language Teaching and Linguistics: Abstracts Vol. 8, No. 4, 1975, p. 211.

(4) J. James, op. cit., p. 16.

production is not yet fully automatized, the learner strives to reduce the efforts of speaking by simplifying the rules according to universals; such as reducing redundancy and leaving off grammatical endings." (1) In the context of the learners' strategies, the role of psychological processes in syntactic development is revealed. Moreover, such context gives an emphasis to the idea that syntactic analysis based on linguistic rules is insufficient and that psychological rules of acquisition are more important. (2)

Cook, among others, believes that the adult L₂ learner would only have to fall back on this strategy with sentences of much greater complexity, because of the correlation that is believed to exist between short-term memory capacity and the ability to comprehend different types of syntax. Since one of the outstanding characteristics of speech processing memory is its limited capacity for syntax, the adult L₂ learner, despite his better memory capacity, still finds a grammatical sentence difficult to understand when his speech processing memory capacity is overloaded or exceeded. In processing sentences, a great deal of the competence of the speaker or hearer depends on his knowledge of the word or the word groupings. This emphasizes the importance of the idea of 'structure dependence' or a knowledge of where the main boundaries among words are formed. It is also sometimes referred to as the problem of "chunking". (3)

(1) J. James, op. cit., p. 16.

(2) See: R. Clark, "Performing without competence", Journal of Child Language (1, 1974, 1-10) p. 143.

(3) See: V. J. Cook, op. cit., p. 21.

The mechanism of "chunking" as a psychological phenomenon helps to expand the immediate memory span somehow beyond its limited capacity. It seems evident that in order for efficient processing of speech to take place, some grouping or chunking must be operant in speech production and in the perception of speech, and hence in the organization of strings of words into word groups. Rommetveit and Turner explain the effectiveness on memory of this particular mechanism of chunking as follows: "As immediate memory is relatively fixed with respect to the total number of elements or "chunks" which can be assimilated or memorized at one time (approximately seven), this ability to recombine elements into larger and larger chunks increases the total amount of information which can be processed at one time."⁽¹⁾

When the sentence goes beyond the normal syntactical length, it becomes confusing to the L₂ learner who then cannot easily recognize its structure or work out which bit of it goes with another to give a certain meaning. As Stork and Widdowson have put it: "An awareness of the individual constituent parts of a sentence and the relationship between them often helps to resolve ambiguities." The writers give the following example as an illustration of a complex syntactical structure:

"The old woman who lives in the house
on the hill has gone for a holiday in London."

(1) R. Rommetveit and E. A. Turner, "A study of "chunking" in the transmission of messages", in R. Rommetveit and R. M. Blaker (eds.), Studies of Language, Thought and Verbal Communication (New York: Academic Press, 1979) p. 334.

They advise the L₂ teacher to help his L₂ learners, by means of chunking, over the task of reducing the individual constituents of the sentence into the basic simple structure:

"She went." (1) The L₂ teacher should know that the limitations of memory are such that to understand a sentence such as: "The person who received the parcel and gave it to the housewife was the one who ...", depends very much on a knowledge of structure which allows the organization in memory of the constituents as the utterance is taking place.

From the point of view of the adult's limited memory capacity for syntax, there is a similarity in linguistic behaviour between him and that of the native child, a point referred to by Cook:

"It seems then that speech processing memory works in the same way in all speakers of English, and that, at least with respect to this syntactic point, the foreign learner's behaviour is similar to that of the native child because he has a more limited capacity for syntax in speech processing than the native adult." (2)

It can be concluded that the efficiency of the memory capacity of both L₁ and L₂ learners is affected by their growing linguistic knowledge and the expansion of their

- (1) F. C. Stork and D. A. Widdowson, Learning About Linguistics (London: Hutchinson Ltd., 1974) p. 96.
 (2) V. J. Cook, op. cit., p. 5.

repertoire of structures to comprehend or to express more complex ideas. Clark emphasizes this point in her statement that "... memory capacity is not a fixed quantity, but is affected by the structure of the material to be remembered".⁽¹⁾ She refers to the importance of the relationship between memory and linguistic competence and hence she gives more support to the view that lack of familiarity is a more important factor in sentence complexity than length - an issue worthy of consideration in teaching a second language to adults in a formal situation.

The strategy of overgeneralization used by both L₁ and L₂ learners is a powerful device for simultaneously simplifying and unifying. Overgeneralization is one way of conserving or keeping from change, which is a strong instinctive tendency present in both types of learner in their attempts to seek patterns and cohesion, not only in their input, but within their own multifaceted approaches to the linguistic input. According to Karmiloff-Smith, "Seeking consistent patterns is indeed the most efficient heuristic for coping with any environment, be it physical, conceptual, perceptual, linguistic, or even emotional".⁽²⁾

As Corder (1967) has shown, the learner makes certain errors in the foreign language due to overgeneralization of elements in the L₂, which can be taken as an indication that

- (1) R. Clark, "Performing without competence", Journal of Child Language I, (1974) p. 9.
 (2) A. Karmiloff-Smith, A Functional Approach to Child Language (Cambridge/New York: Cambridge Univ. Press, 1979), p. 237.

he, like the child learning his L₁, learns the second language by the mechanism of data-processing and hypothesis formation. Corder therefore hypothesizes that "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".⁽¹⁾ Errors due to overgeneralization have been termed intralingual errors in contrast to errors due to transfer which are labelled interlingual errors. For some theorists this strategy may prove helpful in organizing the facts about the second language, and in giving the learners the opportunity of consolidating the procedural aspect of learning. By doing so, it allows the procedure to become automatic. Once the learners have consolidated the basic function, i.e. the consistent patterns, by keeping it implicitly isolated from other competing ones, i.e. exceptions, they are then in a position to attach to it indicators that there may be exceptions to the implicit rules of the basic or core function. This indicates that the basic function has to become highly compiled and automatic to allow for the learning of new additional functions that have the status of counter-examples. Automatization has the function of "freeing the representational processing-space for other development".⁽²⁾ Overgeneralization, which represents the procedural aspect of the initial isolation of function enables the learners to consolidate each of the functions and render them 'tangible'. "If the child

(1) Quoted by J. James, op. cit., p. 8.

(2) A. Karmiloff-Smith, op. cit., p. 240.

were to take into consideration each new piece of information, constantly remodel his procedures, and slip to and fro between competing theories about the environment, he would not have the opportunity of consolidating the procedures in the first place."⁽¹⁾ Karmiloff-Smith suggests that the child may be aware implicitly that he has pushed aside competing features of the environment, and that he may keep a 'decision trace' in memory,⁽²⁾ a point which will be discussed later in the chapter about the environmental factor.

On such grounds, first language acquisition and second language learning must be viewed as processes depending on both reasoning and automatization (or memorization). Lakoff does not entirely agree with the theory of language learning which is based on reasoning alone because of the existence in language of some linguistic phenomena which are not based on logic but are merely accidental, the acquisition of which depends rather on memorization. He remarks that "if we watch a child learning to speak his own language, or - even more clearly - an adult learning a second language, we note that he often has recourse to his memory".⁽³⁾ Memorization plays a role in the acquisition of the different components of language.

"The "cognitive pendulum principle" hypothesized by K. E. Nelson and K. Nelson⁽⁴⁾ accounts for both factors needed for learning: automatization and reasoning, and which manifest themselves in the observed shifts back and forth in the

(1) A. Karmiloff-Smith, op. cit., p. 240.

(2) A. Karmiloff-Smith, ibid., p. 237.

(3) R. Lakoff, op. cit., p. 292.

(4) K. E. Nelson and K. Nelson, "Cognitive pendulums and their linguistic realization", in K. E. Nelson, Children's Language, Vol. I, 1978, p. 223.

developing child in two senses: (i) between periods of unmistakable growth and periods of repeated, even rigid application of skills and strategies recently acquired and (ii) between growth characterized by one quality or dimension (e.g. wide boundaries for new concepts) and growth of an opposing nature (e.g. narrowness in new concept boundaries). The broad outlines of the cognitive pendulum theory as stated by K. E. Nelson and K. Nelson are as follows: There are many pendulum shifts that apply primarily or exclusively to system and subsystem changes. Among these, which is of immediate concern to the present discussion, is the following - "Shifts from rapid acquisition of new skills and rules to limited growth while old skills and rules are repeatedly applied".⁽¹⁾ When old skills and rules have not become firmly established by automatization, the system to be acquired will be prematurely closed and resistant to new information, and thus the old rules which are still in the process of acquisition and automatization are restrictive in scope, flexible and broadly applied. This state of affairs represents the early stages of system development.

III Both processes show some common developmental patterns

Both processes have been described as "movements along a developmental continuum".⁽²⁾ This description is based on the belief that the sequence of development whereby both learners move towards mastering the basic rules of the language

(1) K. E. Nelson and K. Nelson, op. cit., p. 225

(2) S. P. Corder, "Learner talk and teacher talk", Audio-Visual Language Journal, Vol. 16, No. 1, 1978, p. 7.

concerned shows common developmental patterns. In this respect, Kennedy points out that "instead of viewing the child's utterances as abbreviated adult utterances plus errors, psychologists now tend to approach the child's language as a system in its own right."⁽¹⁾ By regarding the child's competence at a given age as a self-contained internally consistent system not dependent on the full adult system, the idea of interim grammars has emerged. The child is believed to make a series of hypotheses about the structure of the language which he tests and abandons or preserves. Each successive hypothesis is an interim grammar. The last hypothesis is the final adult grammar of competence in the language.⁽²⁾ In the same way, a second-language user is believed to possess a set of cognitive structures acquired by data-processing hypothesis formation in which the making of errors is evidence of the learning process itself which has now been regarded as not only inevitable but necessary. "The making of errors then is a strategy employed both by children acquiring their mother-tongue and by those learning a second language."⁽³⁾ The L₂ learner is seen as constructing for himself a grammar of the target language on the basis of the linguistic data in the language to which he is exposed and the help he receives from teaching. The process has been called by Dulay and Burt "the creative construction hypothesis."⁽⁴⁾

(1) G. Kennedy, op. cit., p. 71.

(2) See: V. J. Cook, "The analogy between first and second language learning" IRAL, Vol. VII, 1969, p. 208.

(3) S. P. Corder, "The significance of learner's errors", IRAL, 1967, p. 167.

(4) See: S. P. Corder, "Error analysis, interlanguage and second language acquisition", in Language Teaching and Linguistics: Abstracts, Vo. 8., No. 4, 1975, p. 203.

Corder's study of the concept of errors is especially significant. His analysis of errors made by students of a second language suggests that the 'ill-formed' structures are the output of rules which constitute a 'transitional competence'. He points out that a learner's errors, which provide evidence of the language system he has learned at a particular point in the course, are significant in three different ways: (i) to the teacher, (ii) to the researcher and (iii) to the learner himself.⁽¹⁾ The $L_1 = L_2$ hypothesis confirms the view that the making of errors is a learning strategy - the testing out of hypotheses about the structure of the new language for rejection or adoption.

The linguistic system which underlies second language speech is at least partially distinct from both L_1 and L_2 . This linguistic system has been called, among other terms, "a learner language system", "an approximative system", "an interlanguage". This linguistic system of the L_2 learner has some characteristics in common with the child's interim grammars. Three main characteristics of language learner language and child language can be summarized as follows:

- (i) They have a dynamic nature;
- (ii) They represent smooth processes which are not random but systematic, i.e. not inconsistent but understandable;
- (iii) They form a sort of developmental continuum, in the sense that errors made are eradicated over time since they are developmental in nature.

(1) S. P. Corder, "The significance of learner's errors", IRAL, 1967, pp. 161-170.

The following are sub-class characteristics:

- (i) The stability over time of certain errors, (ii) the phenomenon of backsliding or the regular reappearance in bilingual speech of fossilized errors that were thought to be eradicated, and (iii) the mutual intelligibility that appears to exist among speakers of the same NL or TL. (1)

(1) The dynamic nature:

One of the main difficulties in conceptualizing learner language as a phenomenon is its dynamic nature which it shares with that of the child. Corder draws attention to this fact in his remark that "just as it is now possible to accept the variability and dynamic nature of child language, it should be possible to do the same for the language learner". (2)

This common quality which characterizes the languages of both L_1 and L_2 learners is manifest by the fact that the utterances made by them, whilst having certain characteristics in common with those of the adult's or native speaker's languages, nevertheless are different in many ways. As a result of using some innate mechanisms and strategies, a smooth change takes place in their verbal behaviour which makes their linguistic output dynamic in nature, a process that will become clearer when talking about the process of smooth change.

- (ii) L_1 and L_2 learning are processes of smooth change: systematic in nature (systematicity at one particular point in time)

(1) See: L. Selinker et al., op. cit., p. 141.
 (2) S. P. Corder, "Learner language and teacher talk", Audio-Visual Language Journal, Vol.16, 1, 1978, p. 6.

The language of both L₁ and L₂ learners manifests a distinctive structure of its own at each particular stage - a structure that is related in some 'reduced' fashion to the adult or native speaker structure from which it is derived. (1) Ausubel argues that a complete psychological analysis of the successive structures that evolve would require specification of (a) the cognitive processes involved, (b) the relevant variables influencing these processes and (c) the role played by general characteristics of the prevailing stage of cognitive development. (2)

(a) The cognitive processes involved:

Since in general terms, child language and learner language do not conform exactly to what native speakers of L₁ and L₂ produce, and since they differ from their utterances in systematic ways, the forms of the utterances produced by both learners are not random. Systematicity may mean that such speech evidences recognizable strategies. The term 'strategy' is used to refer to the processes of first and second language data in an attempt to express meaning. These cognitive strategies may occur at the conscious or unconscious level. It is the consistent use of these strategies, e.g. language transfer, overgeneralization and simplification, that makes child language and learner language systematic in nature. (3) As a result of the use of these innate mechanisms, a smooth change in their verbal behaviour takes place. Because of the smoothness of the processes, Corder makes the comment that "... to describe the dynamic nature of learner

(1) D. P. Ausubel et al., op. cit. p. 70.

(2) Ibid., p. 70.

(3) See: L. Selinker et al., op. cit., p. 141.

language by saying that any one learner jumps, as it were, overnight from one stage along the learning path to the next in the series is not only counter-intuitive but demonstrably false". (1)

According to many researchers of language development, children follow - within certain limits - a predictable course of events, i.e. they employ similar strategies such as over-generalization, simplification, selectivity, etc. that make their language development so remarkably constant. The first two strategies have been discussed elsewhere in this section. The third concerns us here. By 'selectivity' is meant that the child pays attention to and therefore learns only and exactly his own responses, ignoring or misunderstanding the speech input he does not understand. This strategy has a positive function for the L_1 learner and plays an active role in shaping language input for him. First, it causes the adult to modify and simplify his speech; secondly, it helps protect the learner from sentences which are more complex than he can account for in his own grammar at a given time, and thirdly, it gives the child the opportunity to build his own grammatical system on the basis of a relatively tractable body of data about the adult language. (2) Adult L_2 learners also use the same strategy in learning their L_2 . In his book How Adults Learn, Kidd emphasizes this point: "We are all aware of how selective is our attention. One listens, sees, perceives,

(1) S. P. Corder, op. cit., p. 7.

(2) See: E. Snow, "Young children's responses to adult sentences of varying complexity", Paper presented at the 3rd international congress of Applied Linguistics August, 1972, Copenhagen, Denmark.

selectively. Many sensory experiences are ignored until they are required to give meaning or content to some need of the individual. Much is ignored and some experiences are even rejected and distorted. Notice that what is rejected is what is inconsistent." (1)

bias (b) Some variables influencing the cognitive processes:

A central key factor that affects selectivity for both L₁ and L₂ learners is that of the 'self', a point that is consistent with the affective factor introduced by the 'four-factor theory' and emphasized by a number of researchers in the field. According to Kidd, for example: "All new experiences for the learner are symbolized and organized into some relationship to the self, or are ignored because there is no perceived relationship, or are denied organization, or given a distorted meaning because the experience seems inconsistent with the structure of the self." (2) Furthermore, Kilpatrick, in explaining what to learn means, puts the same emphasis on the same central issue, i.e. the rich experiences of living connected with the overall needs of the individual, neurological, cognitive and affective:

"I learn what I learn as I accept it.

I learn it in the degree that I live it,
in the degree that I count it important to
me, and in the degree that I understand it
and can fit it with what I already know.

And what I learn I build it at once into a

(1) J. R. Kidd, How Adults Learn (New York: Association Press, 1973) p. 131.

(2) Ibid., p. 131.

character - that, in fact, is what to learn means." (1)

Positive and negative attitudinal bias seems also to be connected with the 'self' in its whole entities: emotions, instincts, intellect, etc. The effect of those kinds of bias on the cognitive structure is well recognizable. "In case of positive attitudinal bias .. it seems reasonable to suppose that the cognitive dimension of attitude structure contains more relevant and appropriate subsuming concepts than in the case of negative bias. Hence the material can be readily anchored to cognitive structure, need not compete with existing meanings, and is therefore less ambiguous and less subject to forgetting." (2) In comparing adults with children from this point of view of positive and negative bias, Ausubel et al. have argued that older individuals are more likely to have negative bias, or 'emotional blocks' with respect to particular subject-matter areas, and to be subject to a marked falling off of intellectual enthusiasm, and flexibility. (3)

Bruner, while recognizing intellectual similarity of human beings at all ages, finds children more spontaneous, creative, and energetic than adults, (4) a psychological factor that facilitates first language acquisition. According to Roberts, "where second language acquisition fails, it is

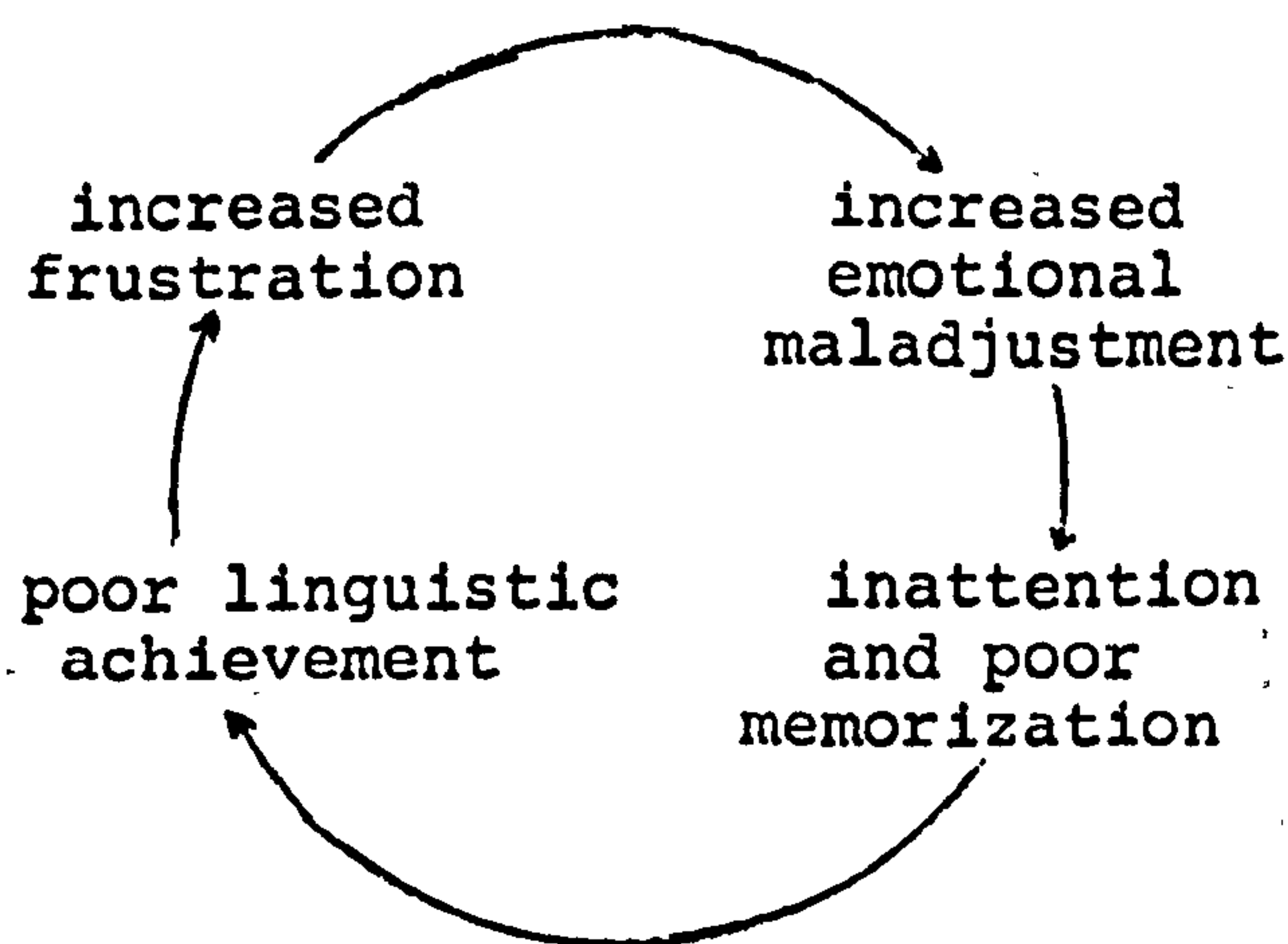
- (1) W. H. Kilpatrick, Modern Philosophies and Education (Chicago: National Society for the Study of Education, 1955) p. 153.
- (2) D. Fitzgerald and D. A. Ausubel, "Cognitive versus affective factors in the learning and retention of conversational material", in Journal of Educational Psychology 54, 1963, pp. 73-84.
- (3) D. P. Ausubel et al., op. cit., p. 250
- (4) J. C. Bruner, The Process of Education (Cambridge: Harvard Univ. Press 1960) pp. 39-40.

not because that part of the mental organization dealing with language acquisition has for biological reasons collapsed, but because its functioning is impaired by psychological factors detrimental to the acquisition of further languages".⁽¹⁾ Certain internal and external variables influence learning performance either in a positive or a negative way. Sherwood refers to the influence of certain personality characteristics and psychological reactions on memory and learning performances in adults, by citing the studies at Duke University which indicate that anxiety or fear reactions, 'authoritarian' type personalities, rigidity, tend to inhibit response to learning tasks in adults or aged subjects, and exert influence on perception, motivation and selective memory, and therefore affect those personal qualities of persistence, flexibility, originality and fluency.⁽²⁾ From all this, it would seem that environmental factors play an essential role in either stimulating cognitive development or forming an obstacle that causes its decline. In a study by Hockett about the emotional crises undergone by adults in their learning of a second language, it has been shown that young children are less subject to such emotional difficulties in their L₂ learning task than adults are. Hockett explains this emotional difference between the two types of learner by giving evidence from immigrants to his country (the U.S.A.): "If the child has not yet reached the verge of adolescence and

- (1) J. T. Roberts, "The LAD hypothesis and L₂ acquisition: The Relevance of the former for the latter", Audio-Visual Language Journal, Vols. I and II, 1972-73, p. 108.
- (2) S. Sherwood, "Sociological aspects of learning and memory", in D. B. Lunsden and R. H. Sherron (eds.) Experimental Studies in Adult Learning and Memory, 1975, p. 89.

is transplanted to an environment in which a different language is spoken, he usually accommodates to the new language with little emotional difficulty and eventually with high accuracy. Children of immigrants to this country, whose exposure to English has been continuous since the age of four or five or so, show little or no trace, as adults, of interference from some other language. But if the child has passed this crucial biological point, the task of learning is emotionally difficult and learning is hardly ever perfect."⁽¹⁾

The present study views the relationship between emotional maladjustment and L₁ and L₂ acquisition and learning as a circular one, in the sense that maladjustment often interferes with the learner's ability to concentrate and to remember. Poor linguistic achievement increases the learner's anxiety, and he becomes more emotionally disturbed. This can be represented in the diagram below.



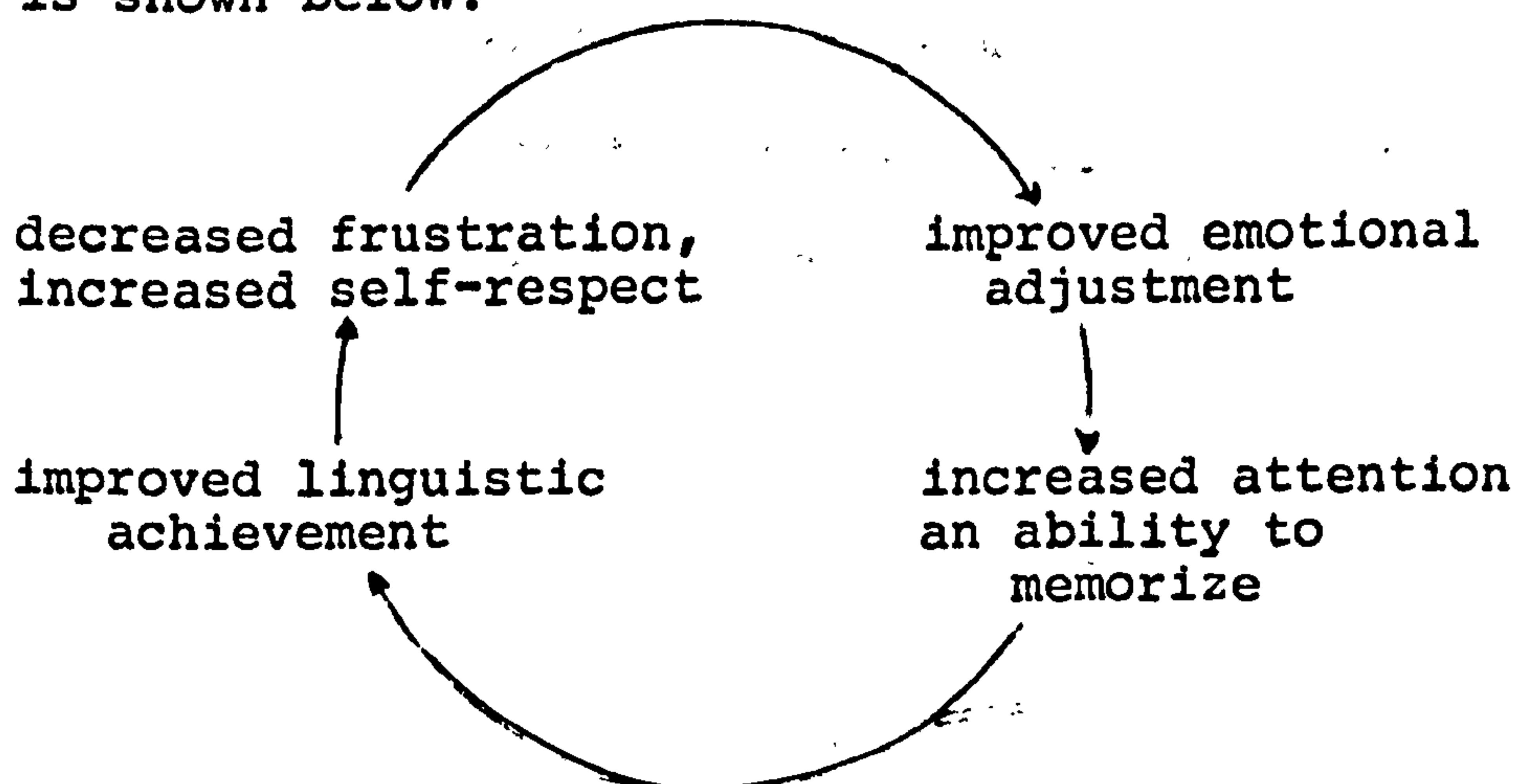
Eisdorfer distinguishes between learning and performance and suggests that the result of studies of learning in older persons are contaminated to a considerable extent by performance factors.⁽²⁾ When the pace of learning is more

(1) C. F. Hockett, A Course in Modern Linguistics (New York: Macmillan, 1958) p. 361.

(2) C. Eisdorfer, "New dimensions and a tentative theory", in D. B. Lumsden and R. H. Sherron (eds.), Experimental Studies in Adult Learning and Memory 1975, pp. 176-177.

rapid, the older person does not respond. Thus poor learning under moderately rapid pacing can be attributed to a tendency on the part of the learner to withhold responses but not to his inability to respond or to process new information. Eisdorfer speculates that the tendency of the older person to withhold his response might be somehow related to heightened level of stress for "... the older person may be made more upset by having to learn; and this state and its physiological correlates result in a tendency to withhold responses with an apparent decline in verbal learning".⁽¹⁾

On the basis of these psychological variables that are referred to as performance factors, it can be hypothesized that the deficit in learning ability may be an artifact of the failure to understand these variables. An awareness that emotions may be an aid or a hindrance to learning helps to reformulate the previous diagram and put it into the reverse as is shown below:



In comparing the motivation for learning in each case, Corder finds the term 'motivation' unwarranted with regard to L₁ acquisition since such language learning "comes

(1) C. Eisdorfer, op. cit., p. 187.

naturally" to the child and is not a result of the discovery of its practical utility.⁽¹⁾ For other investigators, however, like Lado and Beheydt, the motivation in first language acquisition could be called existential, whereas that of second-language learning is only instrumental. R. Lado has stated that "the child is forced to learn the first language because he has no other effective way to express his wants. In learning a second language this compulsion is largely missing, since the student knows that he can communicate through his native language when necessary."⁽²⁾ Moreover, according to Snow (1975)⁽³⁾ there is more free choice in learning a second language than in learning the first. Therefore second-language learning is more affected by motivation, desire to be able to communicate with native speakers, interest and admiration of the culture to which the language gives access. In learning a second language by young children, it is believed that the younger the learner, the less he is likely to question his own motives for learning a second language, the less inhibited he is in his willingness to communicate, the more open he is to other cultures (the negative stereotypes are not so ingrained), and the more willing he is to make mistakes.

From these observations came the conclusion that, "the younger learner may not be as efficient a learner, but he may be less resistant to the learning process".⁽⁴⁾

- (1) S. P. Corder, Introducing Applied Linguistics (England: Penguin Books Ltd., 1975) p. 110.
 (2) R. Lado, 1964, pp. 5-6 quoted by L. Beheydt, "Foreign language teaching methodology", I.T.L. Review of the Institute of Applied Linguistics, Lousain, Vols. 23-26, 1974, p. 41.
 (3) and (4) A. D. Cohen, "The case for a partial or total immersion education", in A. Simoes Jr. (ed.) The Bilingual Child (New York: Academic Press, 1976) pp. 69-70.

Apart from motivation, anxiety, and types of personality that have an impact on learning, Sigel and Cocking discuss the cultural influence on cognition and learning and sum up this idea in the following terms: "... the influence of culture and individual growth experiences, are among the critical features that define the kind of cognitive development the child will experience. It is within this context that the child develops conceptions of reality and defines the meanings attributed to various experiences. It is also in this context that the child develops the representational modes used to organize and express this reality."⁽¹⁾

Point (c) which is related to the role played by general characteristics of the prevailing stage of cognitive development will be discussed in the following paragraph.

(c) First- and second-language learners' speech is developmental in nature:

Unlike the traditional linguistic theory which based its assessment of learner language on the assumption that it represents a static well-defined system, the new orientation of linguistic theory is directed towards a reassessment based on a view of learner language as a continuum of more or less smooth change in behaviour which is not inconsistent but perfectly understandable. The new perspective is to view learner language as a developmental continuum and the learner's task in the course of acquiring his second language as moving along this continuum of development.

(1) I. E. Sigel and R. R. Cocking, op. cit., p. 233.

In the arguments about the fundamental issue of continuity vs. discontinuity in language acquisition, "it is continuity rather than discontinuity that appears to be the rule",⁽¹⁾ i.e. that children build directly on the knowledge of what they already know when they come to the formidable task of mapping ideas and communicative intentions onto language. H. H. Clark and E. V. Clark reveal the importance of continuity in language at several levels. By giving the example of how at first children use gestures on their own and later accompany them with words, the writers emphasize that there is no such thing as discontinuity in the process. They argue that although the emergence of the child's first words, for example, seems to mark a discontinuity, a change from one word to words, this is far from being the case for "Even so, one could argue that there is continuity in the child's ideas at both 'stages' and that it is some of these ideas that are first mapped onto words. One could also argue that there is continuity between the child's babbling and the first words. The first words, then, could simply be viewed as a combination of elements already present at an earlier 'stage' of development."⁽²⁾ On this ground, stages are viewed not as necessarily marked by discontinuity in the strict sense, but as often pinpointing the emergence of new combinations of behaviour.⁽³⁾ Thus, it can be said that the process is cumulative in nature and that each stage is significant as a preparation for the one that follows.

(1) H. H. Clark and E. V. Clark, Psychology and Language (New York: Harcourt Brace Jovanovich, Inc., 1977) p. 298

(2) Ibid, pp. 297-298.

(3) See: H. H. Clark and E. V. Clark, ibid., p. 298.

According to Lenneberg the emergence of the two-word stage comes as a result of differentiation in the field of semantics. "Because of differentiation a single word no longer refers coarsely to entire physical or social situations. No longer does the word mommy cover in a vague way every aspect of the familiar provider, nor the word sock the entire world of sock topics. Two separate types of relations may be computed now from a single scene, one by the name mommy, the other by the name sock." (1) Lenneberg proposes furthermore that in L₁ acquisition, the differentiation in the field of semantics leads necessarily to the first and most basic aspect of syntax predication:

"Progress in semantic differentiation leads to syntactic development, because the reduction of the semantic field of one word naturally entails the addition of specifiers and therefore leads to topic-comment constructions by means of modifying words: 'What about mommy?' 'What about sock?'. The syntactic process of this primitive predication is actually preserved in a rather sophisticated, fully mature syntactic process, namely compounding." (2)

Thus compounding or the process of joining of words does represent from the beginning a syntactic interrelationship. Differentiation which leads to further increase in the semantic field leads to compounding, which in turn paves the way for the acquisition of syntax. The phenomenon of continuity reveals itself quite clearly in all these interrelated fields.

(1) E. H. Lenneberg, op. cit., p. 210.

(2) Ibid., p. 210.

These ideas are conceptualized in Ausubel et al.'s cognitive theory to which they gave the name the "Assimilation Theory". According to them "there is no paradox ... in understanding how individuals can comprehend and generate an infinite number of sentences from a finite vocabulary if one simply applies the basic principles of assimilation theory".⁽¹⁾

In terms of their assimilation theory, "all that a child requires to understand a new sentence is that it can be related nonarbitrarily and substantively to existing concepts and prepositions in his or her cognitive structure, including concepts of syntactic structure and function acquired through repeated exposure to multiple examples in adult language".⁽²⁾ Their theory emphasizes the associative nature of the process of learning in terms of the importance of existing relative knowledge in cognitive structure for the facilitation of meaningful learning. It is based on the grounds that when learning material is arbitrarily related to cognitive structure, no direct use can be made of established knowledge in internalizing the learning task. The writers emphasize that "... because the human mind is not efficiently designed to internalize and store arbitrary association, this approach permits only limited amounts of material to be internalized and retained, and then only after much effortful repetition".⁽³⁾ Their theory rests on the assumption that it is through an interaction of new information with new relevant existing ideas in cognitive structure that meaningful learning in humans takes place. The emphasis then is on the basic idea

(1) D. P. Ausubel et al., (eds.) op. cit., p. 70.

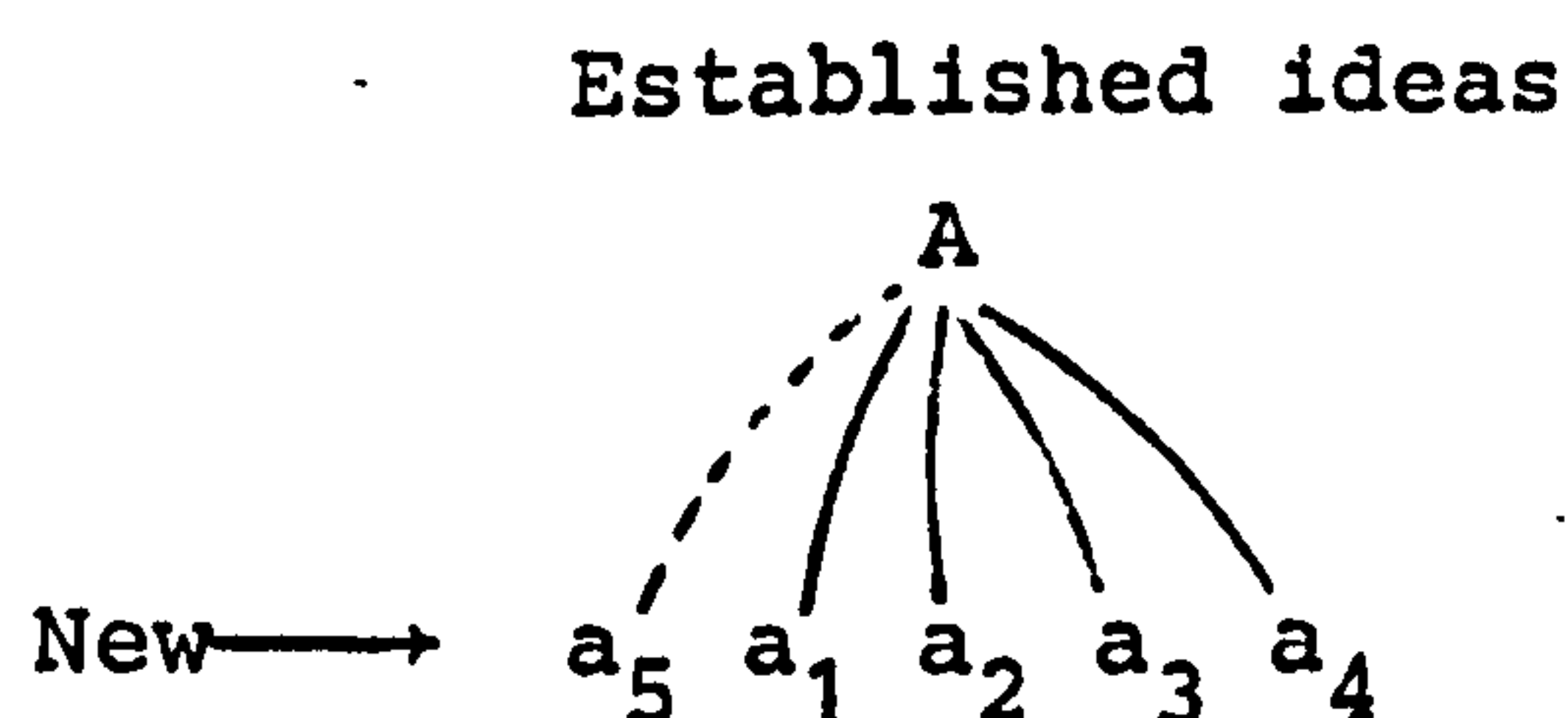
(2) Ibid., p. 70

(3) Ibid., p. 64.

that the acquisition of new information is highly dependent on the relevant ideas already in cognitive structure.

Ausubel et al. have built their assimilation theory on the foundation that the human cognitive equipment, unlike a computer, cannot handle information very efficiently that is related to it on an arbitrary and verbatim basis and that only relatively short learning tasks can be internalized in this fashion, and these can be retained for only short periods of time unless greatly overlearned.⁽¹⁾ The core of their theory has been summarized by them as follows:

"The result of the interaction that takes place between the new material to be learned and the existing cognitive structure is an assimilation of old and new meanings to form a more highly differentiated cognitive structure."⁽²⁾ The key ideas are presented by Ausubel et al. in the following Diagram about the forms of meaningful learning as viewed in their assimilation theory.



According to the theory, new information is linked to relevant pre-existing aspects of cognitive structure and both the newly acquired information and the pre-existing structure are modified in the process. It can be stated, in accordance with the perspective of continuity and that of the

(1) D. P. Ausubel et al., op. cit., p. 45.

(2) Ibid., pp. 67-68.

assimilation theory, that many L₂ learners' errors are 'developmental' in nature, that is they are modified or eradicated over time when new learning takes place. The relation between this theory and the 'four-factor theory' will be made clear in the last chapter: "pedagogical implications".

Richards⁽¹⁾ believes that interlanguage and developmental errors reflect the learners' competence at a particular stage and illustrate some of the general characteristics of language acquisition, rather than reflecting the learner's inability to separate two languages. Although James⁽²⁾ finds it essential to establish a distinction between adults and children learning a second language as a result of Dulay and Burt's (1974) research which has shown that very young children produce less interference errors than older children and adults, Selinker's et al. finding⁽³⁾ puts the centre of gravity not on the age as such but on the environmental circumstances as a whole, which provide experiences that substantially influence learning. They have found out that not all errors are developmental; some become "fossilized". This phenomenon occurs in the case of second language learning by young children when speaking peers are absent. A significant finding such as this gives more emphasis still to the environmental factor than to the cognitive alone; it questions the validity of the critical period hypothesis (CPH); and it adds more support to the present study and its suggested

(1) J. C. Richards, "A contrastive approach to error analysis" in J. W. Oller and J. C. Richards (eds.) Focus on the Learner, (New York: Newbury House Publishers Inc. 1975) p. 97.

(2) J. James, op. cit.

(3) L. Selinker et al., op. cit. p. 141.

'four-factor' theory.

Thus the feature of stability over time of certain errors is not merely confined to L₂ adult learners in classroom situations; it also characterizes the linguistic system of both the child acquiring his L₂ and the adult L₂ learner in a free learning situation owing to either environmental factors or innate cognitive factors or to both. The innate cognitive factors manifest themselves in the case when several learning strategies may operate simultaneously or sequentially, causing 'fossilization'. Generally speaking, fossilization, which is in a sense a sort of permanent deficiency, is more noticeable in L₂ learner's language in a classroom situation than in adult's L₂ learner's language acquired in a free situation. To search for specific reasons for this feature of permanent deficiency in the adult L₂ learner language necessitates looking for differences between the L₁ and L₂ processes in order to be well on the way to knowing a good deal about the nature of the journey undertaken by both L₁ and L₂ learners. The search for an answer to this point is indeed the most basic contribution of the present study.

An attempt will be made here to analyse the similarities and differences between the two processes from the following two points of view: (i) goal (end point), and (ii) starting point. It will be shown through the discussion, and this is in agreement with Corder's view⁽¹⁾, that it is about the latter that there are possible arguments and disagreements.

(1) See: S. P. Corder, op. cit., p. 8.

(1) Goal (end point):

Corder states that there is no problem about the goal, because "we have, and we use in the classroom, either explicitly or implicitly, descriptions of the target language. That is why we say we are teaching."⁽¹⁾ This statement contemplates the task, however, from the point of view of teaching rather than from that of learning. With regard to the latter point of view i.e., the goals of the two types of learner, Stern refers to a point of difference connected with the concept that the end point of the process according to the L₁ learner is the gradual building toward adult grammar, although he begins by producing sentences which do not duplicate adult sentences. In second language learning, on the other hand, what is actually the end point in the learning process is not a native competence in the real sense of the word but an 'interlanguage' that is a form different from the target language characterized by interference both internal and external to language, the extent of which differs, however, from one L₂ learner to another.⁽²⁾ But since there are recognizable individual differences in the native verbal skills, on the one hand, and since no native speaker commands a knowledge of any language "as a whole" on the other; no L₂ learner needs, or can aspire to, a knowledge of the language as a whole.⁽³⁾ To put it in another way, the acquisition of a 'native-like ability' in learning a foreign language is an almost unattainable goal for no L₂ learner under normal

(1) S. P. Corder, op. cit., p. 8

(2) See: H. H. Stern, "Psycholinguistics and second language teaching", in J. W. Oller and J. C. Richards (eds.) Focus on the Learner (New York: Newbury House Publishers, 1975) p. 24.

(3) See: S. P. Corder, op. cit., p. 66.

circumstances or in a classroom situation in particular, will ever have a native performance in his second language competence.

In discussions of what should be the minimum and the maximum levels of competence to be accepted by L₂ learners, the notion of centrality with a language is often introduced. This notion theoretically represents the central core of "language as a whole". According to Corder, "all learners must acquire what is central to the language, but that is only part of what is central to their needs".⁽¹⁾

Because of the distinct character of adolescent/adult second language learning, the acquisition of a native-like competence in phonology, syntax and semantics may never be achieved. A near-native competence, however, is not thought of as being beyond the bounds of the possible; it is set up and accepted as a maximum high level of competence. The question to turn to is, what should be the minimum accepted level? Halls considers that the minimum standard for the teacher to strive for is understandability - the capacity to communicate.⁽²⁾ Stevens, on the other hand, visualizes a scale of competence rising from zero where a child first starts to learn the language to a theoretical upper limit which he calls 'native-like ability'. Between these extremes one can imagine three approximate points. The highest of these, but

(1) See: S. P. Corder, op. cit., p. 66.

(2) W. D. Halls, Foreign Language and Education in Western Europe (London: Harrap, 1970) p. 25.

below the upper limit, Strevens calls 'internationally acceptable'. Below this point is one that he refers to as 'locally acceptable', where the standard of the second language is less than would be required for easy international acceptability but which is adequate for more limited use in the country concerned. And, finally there is a 'threshold of local intelligibility', below which the English of an individual is inadequate for any purpose whatsoever. (1)

One way to ensure the relatively high level of competence, i.e. the ability to produce near-native competence which enables the learner to manage in most situations - is to accept and apply the principle of 'successive approximation'. The teacher must accept as a preliminary stage, and within reasonable limits, an inevitable trial-and-error behaviour on the pupil's part. Such learning behaviour is often accompanied by hesitancy and mistakes which are only natural. (2)

(2) Differences due to different starting points:

While finding some striking resemblances between children's utterances in their mother tongue and those of language learners, in the earliest stages at least, researchers have noticed that the phenomenon of 'interference' from the mother tongue represents a main point of difference between the two learners' languages. They found out that the process of transfer is employed in the case of L_3 acquisition as it is

- (1) P. Strevens, "Improving the teacher's own English", in G. E. Perren (ed.) Teachers of English as a Second Language: Their Training and Preparation (London: Cambridge, Univ. Press, 1968) p. 213.
- (2) See: W. D. Halls, op. cit., p. 25.

the case with L_2 acquisition. Because of the phenomenon of 'interference' which characterizes the L_3 process, the real striking resemblances are believed to exist between L_3 and L_2 , rather than between L_2 and L_1 . Lococo points out that L_2 and L_3 cannot be claimed to equal L_1 acquisition, since "learners of all ages, and at all proficiency levels, employed the strategy of transfer, which is absent in L_1 acquisition".⁽¹⁾ The different hypotheses that exist as an interpretation of the phenomenon of 'interference' agree on one thing, that the differences between the two types of learner are mainly the result of differing starting points in each. Thus, in the comparison drawn in this respect, two possible starting points can be recognized:

- (i) nothing, i.e. no language in the case of the infant acquiring his mother tongue, and
- (ii) the language he already knows, that is, the L_2 learner's mother tongue.

It is noticeable, however, that there is a conflict of opinion in the field of study of the L_2 learning owing to the existence of two different hypotheses with regard to the starting point of the L_2 process postulated by (i) the CA, or Umbau or restructuring hypothesis and (ii) the $L_1 = L_2$ hypothesis, or Aufbau or recreating hypothesis.

- (i) The CA or restructuring hypothesis (a process of Umbau).

This hypothesis assumes that it must be the learner's mother tongue that represents the starting point. The

(1) V. Lococo, op. cit., p. 61.

process of language learning is merely a matter of restructuring (Umbau) of the mother tongue. The developmental course which the L_2 learner follows is a progressive adaptation of the target language. This hypothesis bases its argument on the grounds of the existence of often very obvious mother tongue-like features in the learner's utterances. According to this hypothesis which is built on the interference or transfer phenomenon, the process of second-language learning is that of restructuring which involves progressive removal of mother tongue features and their replacement by target language features. "Transfer would not then be transfer into the new language, but transfer from the old." (1)

The CA hypothesis interprets the process of language learning as habit formation in the sense that where L_1 and L_2 differ, the old habit (using L_1) hinders the formation of the new habit (learning L_2). This psychological interference theory which forms a theoretical base for the Umbau hypothesis has been questioned by recent research findings. D. Lance (1969), for example, reports that one-third to two-thirds of his adult foreign students' English errors were not traceable to their native language. This finding is supported by other studies (Richards, 1971; Ervin-Tripp, 1970; George, 1972; Burt and Kiparsky, 1972). (2) A partial confirmation of the CA product level comes about as a result of valid evidence from existing adult and child

- (1) S. P. Corder, "Learner language and teacher talk", in Audio-Visual Language Journal, Vol. 16, No. 1, 1978, p. 7.
- (2) See: H. C. Dulay, "Goofing: an indicator of children's second language learning strategies", Language Learning 22, 2, 1972, p. 235.

studies which show that a portion of L_2 errors do reflect L_1 structure, but it is not enough to justify the process level which is questionable on theoretical grounds.

Although the interference-like errors appear to confirm the transfer process deposited by the CA hypothesis, the other kinds of errors such as those classified by Dulay as (i) ambiguous errors, (ii) developmental errors and (iii) unique errors - do not.

The L_1 developmental errors he could account for by only the $L_2 = L_1$ hypothesis, which he cites as evidence that they can be used to confirm it. As for the unique errors, Dulay thinks that they must await more systematic L_2 acquisition research. The ambiguous errors, he said, could be explained by both the CA and the $L_2 = L_1$ hypotheses. (1)

(ii) The $L_2 = L_1$ hypothesis or the recreating hypothesis (a process of Aufbau):

While the CA hypothesis offers a transfer theory, the $L_2 = L_1$ hypothesis offers an active mental organization theory. It holds that the L_2 learners actively organize the L_2 speech they hear and make generalizations about its structure as children learning their first language do. In other words, the process of L_2 learning like that of L_1 acquisition starts from a zero point, (i.e. no language). It involves recreating or rediscovering the grammar of a language (a process of Aufbau). Therefore, the errors expected in any particular L_2 production would be similar

(1) H. C. Dulay, op. cit., p. 247.

to those made by children learning the same language as their mother tongue. The account offered by this hypothesis, which is different from that given by the CA hypothesis, is based on the results of studying learners in free learning situations, the majority of which showed little evidence of so-called interference or transfer, except in their pronunciation.

The case is rather different in a teaching situation, where the L_2 learner is not under the immediate pressure of communication and where his attention is therefore consciously directed to the complex structural level of the language. He is always on the look out for logical explanations to which he does not always find a satisfactory answer. (See Section III of this chapter.) The situation is made worse by the faulty presentation of new rules in the classroom and the poor gradation of teaching items. This point emphasizes the direct link that exists between language-independent factors, i.e. teaching, and inefficiency of learning. The undue introduction of a new rule before the old one has been firmly established, automatized, and mastered, would lead to the occurrence of more errors. Thus poor gradation of teaching items contributes to increase in the difficulties involved rather than to decreasing them.

Discovering the nature of the two processes involves formulating these hypotheses more precisely and finding their places in the scheme of first and second language acquisition

and learning, depending on careful examination of more data. According to Corder's⁽¹⁾ speculation, the truth may lie somewhere in between, i.e. the language learning continuum may be both a process of restructuring the mother tongue and a process of elaborating a simple grammar of some sort. Hakuta supports this view when he summarizes the process of second language learning as follows:

"The general conception of the second language acquisition process is that it is a dynamic, fluid progress in which the system of the learner is constantly shifting: shifting in a slow and gradual manner either toward the maintenance of an internal consistency within the structures which the learner possesses, or in the direction of an external inconsistency, where the learner attempts to fit the internal system into what is heard in the input."⁽²⁾

Although many of the errors that second-language learners make are predictable, there are still many unresolved questions: "To what extent are (these errors) due to interference from the native language, and to what extent are they due to language-independent factors? Clearly we cannot claim that the source of the learner's difficulty is due to interference unless we

(1) S. P. Corder, op. cit., p. 9.

(2) K. Hakuta, "A case study of a Japanese child learning English as a second language", Language Learning, Vol. 26, No. 2, 1976, p. 331.

have ruled out the possibility that it is a function of language-independent factors." (1)

The result of Lococo's investigation reveals that "at all times, reliance on the target language exceeds reliance on the previously known languages, a fact also reflected in the high incidence of 'lack of transfer' errors". (2)

With the introduction of the neuro-affective and socio-linguistic variabilities, the 'four-factor' theory makes a much needed contribution to the current study of the processes of L_1 and L_2 , with emphasis on their multi-dimensional nature. It is the objective of the following sections and chapters to show how learning by memorization or imitation (habit formation) and reasoning (mental organization of rules) combine together, affected to a very great extent by the innate neuro-affective variable and the environmental social variable.

Broadly speaking, the 'four-factor' theory, on the basis of the similarities that have been investigated in this section between the two processes, views the first and second-language acquisition capacities as innate capacities shared by both children and adults, but the rate at which both first and second languages are acquired and the effectiveness with which the two languages are used are affected by individual differences both from the point of view of internal and external factors, i.e., variations in general intelligence, in personalities, in

- (1) A. Sheldon, "The acquisition of relative clauses in French and English: Implications for language-learning universals" in F. R. Eckman (ed.) Current Themes in Linguistics (Washington: Hemisphere Publishing Corporation, 1977) p.
- (2) V. Lococo, op. cit., p. 59

motivation and physical health on the one hand and in experiences derived from the environmental and social setting on the other.

The above considerations lead to a number of implications for the teaching of a second language. Indeed, it is here that the concept of teaching may assume its full importance. It may very much be the case that the extent of the operation of the transfer effects is dependent on the strategy with which the second language learner attacks the new task. The strategies used either by the child learning his L_1 or by a successful learner of L_2 may offer clues for teaching, with the possibilities that such strategies may be taught to those who normally make no use of them.

Although the teacher may have little control over what in fact the L_2 learner does mentally with the sequences of materials presented to him, how well he remembers them, whether he focuses on just the intended distinction, whether he tries to assimilate the new material to the old, how much of it he will transfer to new situations, whether he inductively arrives at generalizations, and so on - the teacher must, nevertheless, exert effort to discover, influence, or manipulate the processes that underlie individual learning strategies.

Section Two

Mental Differences

This section tries to look more closely at how the psychological attributes of the adult - in terms of his more advanced stage of conceptual development - are involved in his second language learning task. The section attempts, therefore, to investigate in depth an essential point about some of the basic differences between children and adults in their first and second language-learning task that is related to the stages of cognitive development described by Piaget. This point has been raised by Rosansky and Krashen,⁽¹⁾ and emphasized by Luria and Vygotsky,⁽²⁾ and it will be dealt with in more detail here and discussed in further depth since it is in agreement with the theory proposed in this study which is under consideration.

The reasons for the orientation adopted in this section away from the notion of the neurologically determined 'critical period hypothesis' towards that of Piaget's stages of cognitive development are two-fold: first, the individual differences in patterns of verbal abilities manifested among native speakers which are similar to those found for second language learners and secondly, the experimental studies carried out to test the age differences in the pronunciation of foreign sounds, the results of which are believed to be impossible to reconcile with the predictions of the critical period hypothesis for language acquisition.

- (1) See: V. J. Cook, "The comparison of language development in native children and foreign adults", IRAL XI, 1973, p. 1. See also, W. M. Rivers, "Language learning and language teaching - any relationship?" in W. C. Ritchie (ed.), Second Language Acquisition Research (New York: Academic Press, 1978) pp. 201-202.
- (2) A. R. Luria, op. cit., p. 11.

Snow and H hle question the usefulness of the concept of "native speaker competence", a concept which they find to be very closely related to the critical period hypothesis (CPH) or optimal brain plasticity, on the basis of their tests which reveal individual differences in patterns of verbal skills among native speakers similar to those they have found for second language learners. The investigators emphasize, therefore, that evidence concerning such variation is important to an assessment of the CPH because "if native speakers who have had all the advantages of full critical period exposure to the first language do not achieve equal skill, then the fact that post-critical period learners show a range of skill is not surprising".⁽¹⁾

Moreover, the critical-period hypothesis, which is held to be especially relevant for the acquisition of second-language pronunciation, is again questioned by the same investigators. Snow and H hle⁽²⁾ explained the differences found among the varying age groups, experimentally studied with regard to their optimal achievement of near perfect foreign pronunciation, not in terms of any neurologically-determined critical period, but in terms of psychological motivational factors, such as (i) wishing to 'fit in' and to be indistinguishable from native speakers, the so-called "integrative motive", and (ii) the fear of losing their cultural-personal identities.

(1) C. E. Snow and M. H. H hle, "The critical period for language acquisition: Evidence from second language learning", in Child Development, Vol. 49, No. 4, Dec. 1978, p. 1126.

(2) C. E. Snow and M. H. H hle, "Age differences in the pronunciation of foreign sounds", Language and Speech Vol. 20, part 4, 1977, pp. 357-365.

The results of Snow and H hle's⁽¹⁾ experimental study can be summarized in two points:

- (i) long-term superiority of younger second language learners, an interpretation of which can be provided by various motivational factors, and
- (ii) short-term superiority of older speakers both in a laboratory and in a naturalistic learning situation, which is strong evidence that a critical period for language acquisition cannot provide an explanation.

In another study, the writers find the older subjects much better at other aspects of second-language skill - vocabulary, syntax, morphology - than the younger ones.⁽²⁾

Since the above-mentioned studies present evidence that the neurological critical-period hypothesis cannot provide the explanation needed, the only open fields that remain available for investigation are: (i) the structural view points, represented by Piaget's stages of cognitive development, and (ii) the functional view points, which somehow differ in their explanation of developmental changes in cognitive functioning from Piaget's. The 'four-factor' theory assumes an interactional line of theorizing between the maturational and environmental approaches, since its orientation is to reconcile differences in explanations and to indicate points of agreement between the different approaches.

- (1) C. E. Snow and M. H. H hle, op. cit., pp. 358, 364.
- (2) C. E. Snow and M. H. H hle, "The critical period for language acquisition: Evidence from second language learning", in Child Development, Vol. 49, No. 4, Dec. 1978, p. 1126.

Structural theories conceive of the age-related changes in performance in terms of discrete stages. Each stage is assumed to be characterized by homogeneous cognitive functioning, and this functioning is assumed to be qualitatively distinct from that of earlier and later periods. These discontinuities in intellectual growth are explained on the basis of the successive emergence of distinct mental structures.⁽¹⁾ The stage formulation is depicted in the following figure:

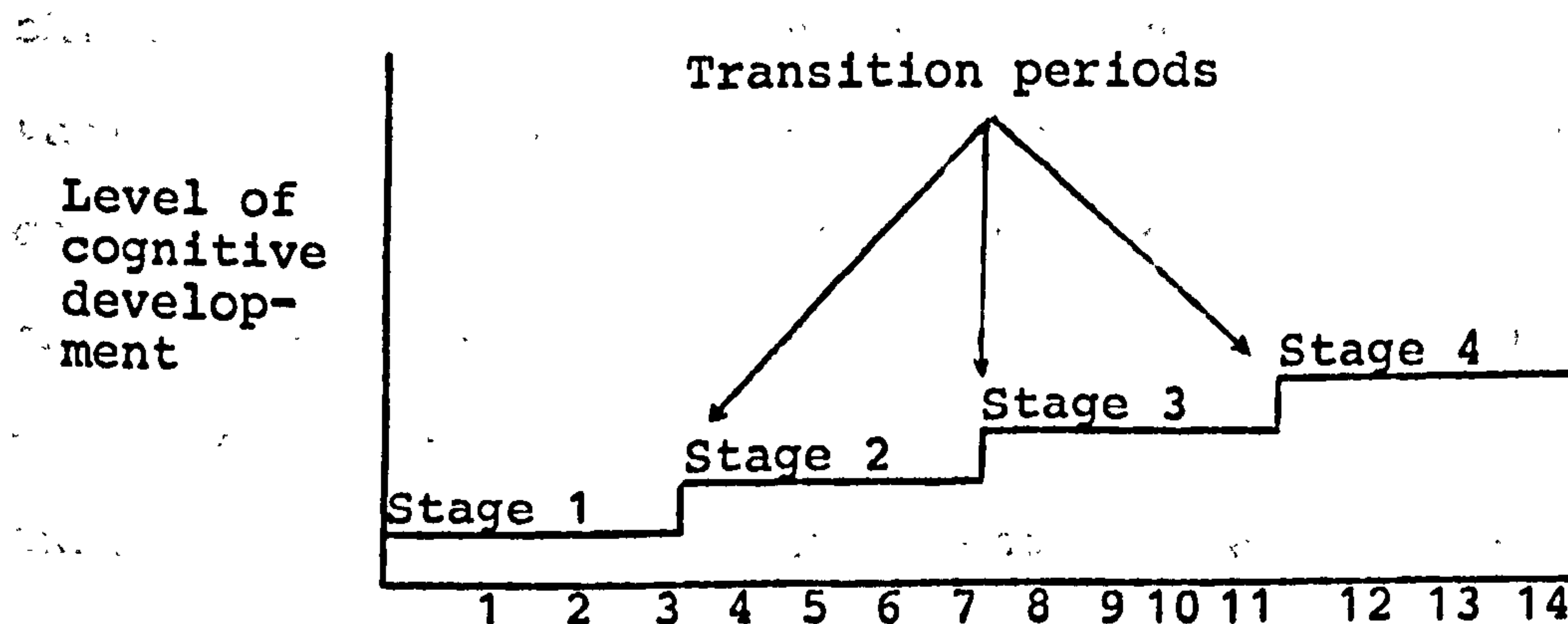


Figure No. 2 : A stage theory of cognitive development.

In the chapter that follows, "the environmental factor", it will be shown how, generally speaking, the L_1 environment does not provide linguistic opportunities to make children consciously capable of dealing with the concepts of 'meaning' and 'syntax' simultaneously. By doing this, it does not accelerate in them the development of abstract thinking. This is indeed an asset which helps the child L_1 learner to acquire his first language without much conscious effort.

According to Piaget's studies, it is at about 11 or 12 years of age that the individual enters into the stage of

(1) Whitehurst and Zimmerman (eds.) op. cit., p. 16.

formal operations. At this age, students are able to use hypothetical reasoning. They begin to think in the abstract with prepositions. They are able to isolate variables and deduce potential relationship. By the age of 14 or 15, students are capable of hypothetico-deductive reasoning performed as a mental operation divorced from actual material objects. They are able to isolate and combine variables which depend on a number of factors, they do not have to limit their considerations to one relationship at a time as the child does, but consider the possible effects of several variables, testing the effect of each by holding other factors constant. Unlike little children, they feel the need to find the reason for the relations they observe and perform the operation of implication and equivalence. They are ready, then, to think about and comprehend the many complexities of syntax.

In his analysis of the fundamental changes in mental processes (changes expressing successive forms of reflection of reality), A. R. Luria observed that:

"The very young child receiving an unfamiliar object does not name it; he uses different mental processes from an adolescent who has mastered language and thus analyzes incoming information with the aid of verbal meanings. A child who develops habits by drawing conclusions from immediate personal

experience uses different mental devices from an adolescent who mediates each behaviour act through norms established by social experience. The direct impressions that dominate the young child give way in the adolescent to the omnipresent abstractions and generalizations of external and internal speech." (1)

Vygotsky calls the radical changes in the mental processes that affect forms of reflection and underlie activity 'the semantic and system structure of consciousness'. (2)

While this phenomenon of abstractions and generalizations on the part of the adults can be an asset, it can also be a disadvantage or a liability since it makes them feel uneasy if deprived of explanation and systematization of the way the new language works. (3) With the aid of experiential factors, the adult learner's rational mind has reached the stage in its development to urge him to apply a wholistic or focusing strategy in his process of learning, in the sense that he is anxious to hold all components of the new language in mind focusing at the same time on meaning as well as on syntax. By doing so, he deprives himself of the usefulness of using a part-scanning strategy that is used by children to unravel meaning first and then proceeds to observe syntax that is acquired perhaps incidentally and without too

(1) A. R. Luria, op. cit., p. 11½

(2) Ibid., p. 11.

(3) See: W. M. Rivers, op. cit., pp. 201-202.

much conscious effort. The process of stimulus-response or trial and correction does not proceed so easily in the adult as it does in the child because of rationalization and the development of the rational mind and its control over the emotions and instincts. The adult cannot proceed like the child does from random vocalization as a first stage to first one-word sentences, to two-word sentences, and so on.

What is essentially interesting to note in this respect is Scoller's notion that there are two major kinds of discourse structure to be mastered by both the child and the adult in their learning of first and second language:

(i) vertical or discourse structures which evolve out of discourse, i.e. the interactions between the speaker and listener, and which obey the rules of conversation and involve the semantic structures, and (ii) horizontal or syntactic structures which involve syntactic relationships and obey the linguistic code.⁽¹⁾

While Scoller classified the crucial elements in first language acquisition into two categories: the mastery of both vertical and horizontal structures, Richards⁽²⁾ finds that they centre on (i) the psychology of learning, that is, those strategies employed by the child as he teaches himself his mother tongue; (ii) the development of his other faculties such as intelligence, cognition, perception, and

(1) Quoted by E. Hatch, "Discourse analysis, speech acts, and second language acquisition", in W. C. Ritchie (ed.) *Second Language Acquisition* (New York: Academic Press, 1978) p. 141.

(2) J. C. Richards, "Error analysis and second language strategies", in J. W. Oller and J. C. Richards (eds.) *Focus on the Learner* (New York, Newbury House Publishers, 1975) p. 116.

so on; and (iii) the structure and rules of the particular language he is acquiring. These he says would appear to shape and formulate the sentences he produces in a systematic way. Thus he finds that first language acquisition is based on the following three bases: (i) psychological bases (strategies), (ii) cognitive bases (perception, cognition) and (iii) linguistic bases. The present study adds two more dimensions: the sociological and the affective. If we look at the child's task from the two perspectives of having to deal with learning complexity and linguistic complexity, then we can incorporate Richard's crucial elements within these two major factors:

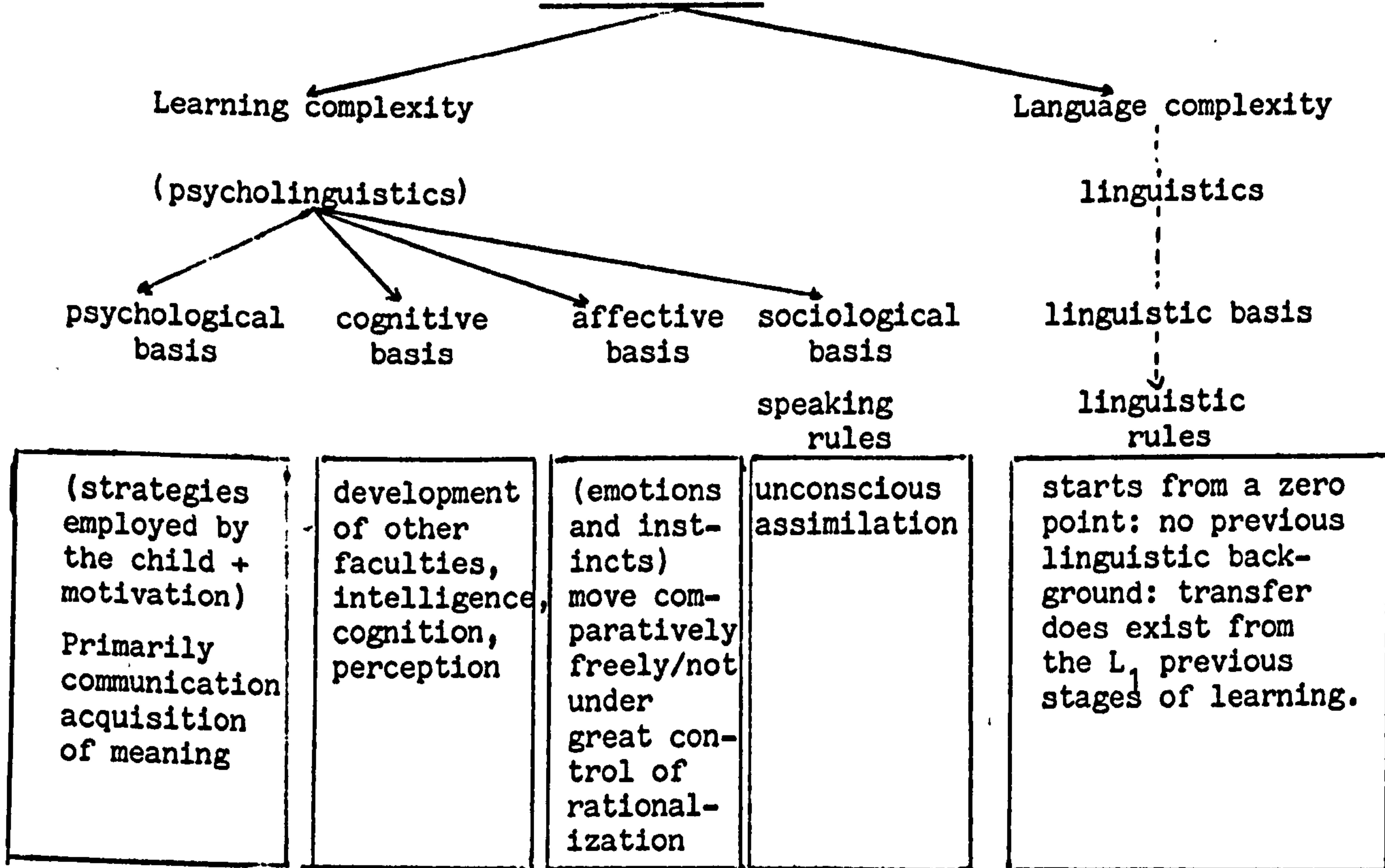
The learning complexity encompasses psychological basis, cognitive basis, sociological basis and affective basis.

The language complexity factor encompasses the linguistic basis.

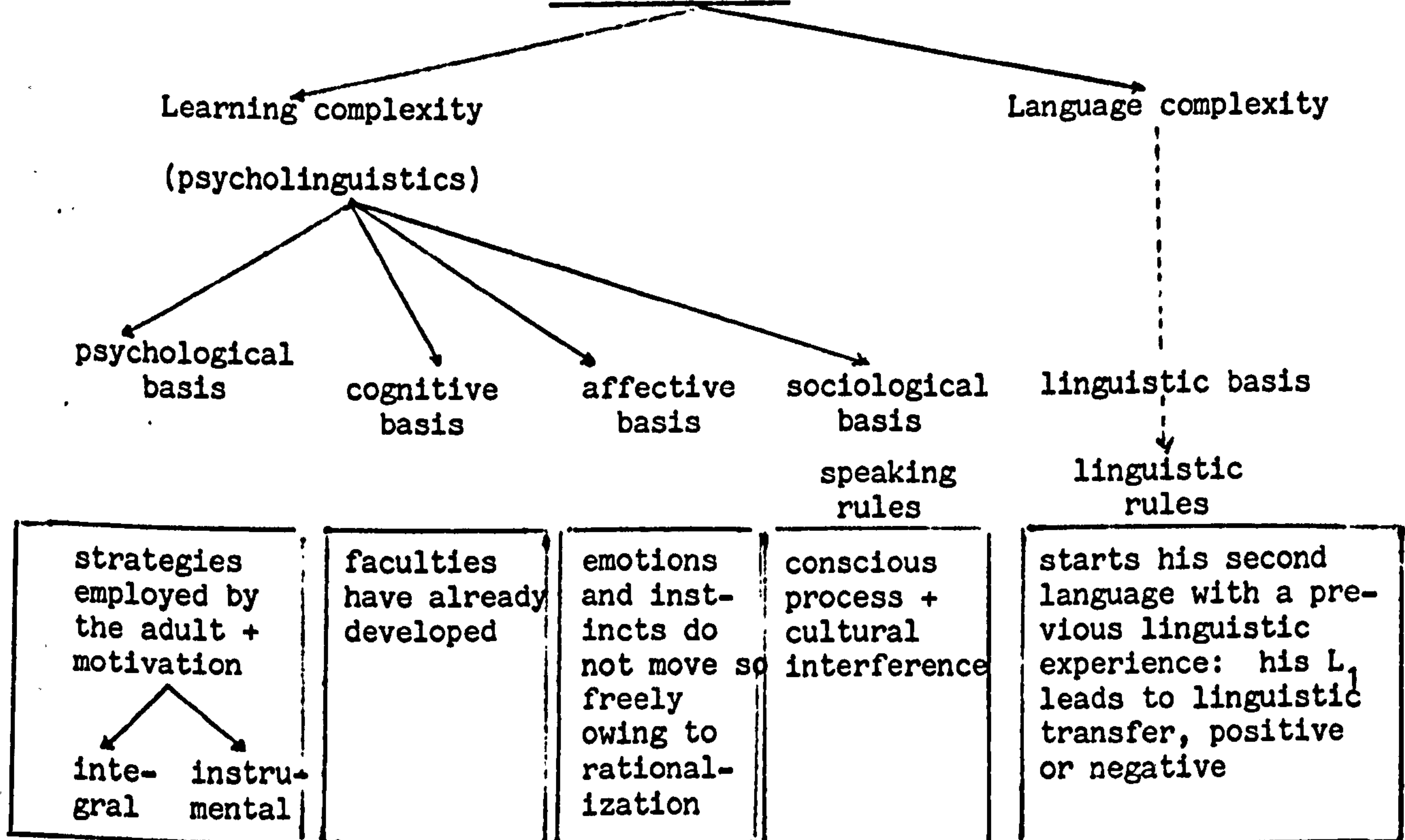
The present study finds broad similarities and particular differences between the two processes of L_1 acquisition and L_2 learning with regard to these same bases in each, which can be exemplified more clearly in the following diagram:

Broad similarities and particular differences between the two processes of L₁ learning by a child and L₂ learning by an adult

I: The child



II: The adult



Carroll, among others, acknowledges the fact that "the process by which a child learns the phonology, vocabulary and grammar of his language is actually fairly long and arduous; even though progress may appear to be rapid, there is a very great deal to learn".⁽¹⁾ He also points to the fact that all aspects of development progress simultaneously and are interrelated. Vertical or discourse structures, for example, are influenced by all the factors classified earlier in this study under the learning complexity factor but to a larger extent - it seems - by the affective factor, i.e. the instincts and emotions. When acquired, they easily pave the way for mastering abstractions, i.e. the linguistic rules. Before speech and language can start to be produced and developed, however, other functions, neurological as well as psychological, must reach a satisfactory maturation stage. Four functions have been mentioned by Ruesch and Kees:

- (i) the infant's ability to discriminate among sounds of high pitch that invest speech tones with their particular characterization;
- (ii) the acquisition by the infant of a memory span to encompass individual speech sounds;
- (iii) the development of the child's motor maturation that helps him uttering meaningful sounds by first executing specialized movements and co-ordinating them rapidly, and
- (iv) the acquisition of frustration tolerance, for "as the tolerance of frustration on the part of the child increases, speech and more time-consuming elaborations become more prominent."⁽²⁾

(1) J. B. Carroll, Language and Thought (Englewood Cliffs, New Jersey: Prentice-Hall, 1964) p. 31.

(2) J. Ruesch and W. Kees, Nonverbal Communication (Berkeley: University of California Press, 1970) p. 17.

In conformity with his physical and biological construction, the child cannot accomplish the task of speech all at once. He has to pass through certain stages that help him develop these functions. Because of his physical and mental limitations to cope with the complexity, he has to tackle it gradually. This strategy which is unconscious and partly unintentional is a great help in minimizing the complexity. In their summary of the origins of language, content, form and use in infancy, Bloom and Lahey make the statement that "the three components of language begin as essentially separate threads of development in the first year of infancy, and are progressively co-ordinated until children induce the relationship between their own resources and needs on the one hand, and the integration of content/form/use in the language in the environment, on the other hand".⁽¹⁾

The child's starting point in the process of his native language acquisition is at a certain early stage focused on approaching the vertical structures without paying so much attention to the horizontal or syntactic structures. By doing this, he excludes for a while the linguistic complexity factor, and facilitates the task for himself. There is enjoyment involved in his learning task since his instincts and emotions are not yet so much dominated by the rational mind, which when gradually developing starts to put certain limitations on the free action of the emotions and instincts. The adult, on the other hand, having his previous advanced semantic and conceptual development but no form to express

(1) L. Bloom and M. Lahey, Language Development and Language Disorders (New York: John Wiley and Sons, Inc., 1978) p. 9

such thoughts, comes under the more acute pressure of the need to express his various thoughts by means of the new linguistic structures which are not yet fully at his disposal.⁽¹⁾

In this respect, McNeill advances an argument that because of the adult L₂ learner's maturity and previous experience of language, he bypasses the procedures of first language acquisition:

"Whereas the child starts from deep structures, the adult approaches the learning of a new language from the surface structures, and then infers the transformations that lead to new deep structures, just the reverse of the child's procedure."⁽²⁾

Reibel opposes this argument on the grounds that we have very little information about what the adult actually does. Reibel believes that since the adult already knows how to construct the deep structures that represent the cognitive or semantic portion of the utterance, he has no need to infer a new system of deep structures for the new language. "To claim that the adult can infer new deep structures from new surface structures credits him with an auxiliary language skill that he possesses as an adult but not as a child, but does not explain why he should use the new one if the old one is available, or even why it should be there at all."⁽³⁾

(1) See: L. Newmark and D. E. Reibel, op. cit., p. 239.

(2) Quoted by J. T. Roberts, op. cit., p. 98.

(3) Ibid., p. 98.

At any rate, although this argument is still subject to debate, it is obvious that the adult starts his process of second language learning with a conscious awareness that he has, in his language-solving problem, to deal with two aspects of learning at the same time: (i) the learning of the vertical structures that differ from those of his native language, though the tackling of it is unlikely to bother him as much as that of learning the second aspect, i.e. (ii) the horizontal or syntactic structures. According to Ausubel et al., learning a foreign language consists fundamentally of the acquisition of an additional set of symbols for old familiar meanings. We learn a foreign language by establishing representational equivalence between new foreign language symbols (both spoken and written) and their already meaningful native-language counterparts, and by reconstructing foreign-language into native-language messages. (1)

A conscious awareness of this sort complicates the process for the adult. For the foreign adult, it is no longer a 'game'; the emotions and instincts do not function freely since they are under the control of the conscious rational mind which seeks for explanations of the abstractions involved, and this mechanism spoils the "beauty of the game" as Brown (2) contemplates the first language acquisition process to be, simply because in the initial stages of language development, the process is subject to a conditioning and reinforcement type

(1) D. P. Ausubel et al., op. cit., p. 74.

(2) R. Brown, "The Original word game", in L. Bloom (ed.) Readings in Language Development (New York: John Wiley & Sons, 1978) p. 387.

of learning where emotions and instincts play a major role and the human affect dominates over cognition in such a way that it makes playing with linguistic forms and meanings an essential part of learning which escapes the adult L₂ learner. In the words of L. K. Engels "The adult learner seems to have lost this magic power of learning a very intricate grammatical system in an intuitive way".⁽¹⁾

Implicit in Engels' above statement is the contribution of the affective factor which exerts a masked influence that passes unnoticed. It will be shown later in this chapter that this masked affective factor helps native children even in learning the complex phenomenon of the syntactical rules of their language through an inductive process of discovering various linguistic regularities in the multiform language patterns to which they are repetitively exposed, and then co-ordinating them into schemes. B. Inhelder and A. Karmiloff-Smith refer to the fact that the necessity of the child to go beyond the here and now is only possible through representation. In other words, "it ... seems plausible that the close relationship between physical activities and organizational activities in the infant can be considered not only analogous to the relationship that later develops between the lexicon and syntax but also as a preparation for it. Just as organizational activities introduce meaningful relations between objects, so syntax organizes the lexicon into meaningful relations".⁽²⁾ The writers hope that "such a

(1) Quoted by L. Beheydt, *op. cit.*, p. 41.

(2) B. Inhelder and A. Karmiloff-Smith, "Thought and Language" in B. Z. Presseisen, D. Goldstein and M. H. Appel (eds.) Topics in Cognitive Development: Language and Operational Thought (New York: Plenum Press, 1978 Vol. 2) p. 8.

hypothesis regarding child language development will provoke more new experimental approaches in psycholinguistics".⁽¹⁾

The baby's combined innate, affective, and cognitive tendencies to explore unconsciously four worlds; "inner world", "object world", "other world", and "language world", will lead gradually to a generalization of their schemes and to their co-ordination - a necessary and preparatory step towards the acquisition of syntax as an abstract entity.

In the process of this discovery, a sort of a "mapping insight" emerges, one which Bloom and Lahey describe as "the infant's realization of the relevance of his or her own capacities to the behaviours involved in linguistic coding. It is an insight that happens gradually, but it is an enormous inductive step in the child's development."⁽²⁾

In comparing young native children with foreign adults, from the point of view of learning the abstract syntactical relationship of language, Ausubel et al.⁽³⁾ refer to the point that young native children discover grammatical rules autonomously and inductively and that they follow this type of discovery learning because of the age factor and its related perceptual strategies that differ from those of the adult L₂ learners. Since young native children are manifestly incapable of understanding complex relationships between abstractions, grammatical generalizations would make absolutely no sense whatsoever to them. With older L₂

(1) B. Inhelder and A. Karmiloff-Smith, op. cit., p. 8.

(2) L. Bloom and M. Lahey, op. cit., p. 72.

(3) D. P. Ausubel et al., op. cit., pp. 78-79.

learners who are capable of comprehending abstract propositions, the L₂ grammatical generalizations can be learned by a different process, i.e. the deductive process. This latter deductive process mainly differs from the inductive type of discovery learning in that it lacks the strong affective element that accompanies the inductive discovery learning, though it has of course its own advantages in the sense that it is a less time-consuming process and allows a wider transferability to new situations.

Section Three

The Associative Nature of L₁ and L₂ Processes: Similarities and Differences

In the case of the acquisition of word meaning, we notice similarities in the two learning processes, i.e. the process of paired-associate learning as one probability. Lipsitt and Reese explain the similarity in this respect, stating that "one probable way children learn word meaning is through the process of paired-associate learning. This is roughly how most persons learn the vocabulary of a second language. The known or familiar object (or word, in the case of a foreign language) is presented along with the to-be learned word."⁽¹⁾

In his article, Language acquisition and classical conditioning, Stemmer⁽²⁾ has attempted to show how first-language acquisition is essentially based on a process which is very similar to classical conditioning, in the sense that the young child's acquisition of comprehension is based on exposure to pairing situations in which a verbal stimulus, S₁, is paired with some other stimulus, S₂. Moreover, Wassermann,⁽³⁾ in his postulated neuropsychological model (NPM) of language acquisition, demonstrates the associative nature of the process. His associative language learning theory deals with a variety of central cognitive problems. In his attempt to explore its dimension, Wassermann refers to it as a sort of neuropsychological molecular biological mapping theory.

- (1) L. P. Lipsitt and H. W. Reese, Child Development, (U.S.A.: Scott, Foresman & Company, 1979) p. 104.
- (2) N. Stemmer, "Language acquisition and classical conditioning", in Language and Speech, 16, 1973, pp. 279-282.
- (3) G. D. Wassermann, op. cit., p. 179.

Wassermann's theory is a reaction against the previously proposed linguistic or psycholinguistic constructs of language which are devoid, in his view, of biological significance. His NPM is an attempt to discover the linkage between the acquisition of language and the various sensory modalities, contributing in this way to the offering of a mechanism in terms of sensory perceptual machinery. According to him, the linguistic theory of the Chomsky school "trivializes reality", because it neglects environmental factors. Instead of postulating that the brain can transform certain sentence types into others as some linguistic theorists of transformational grammar seem to imply, Wassermann prefers to assume that the brain can learn by association, i.e. the formation of concrete "image sequence" memories. "A child acquires language," he says, "by hearing prototype sentences uttered by others. It learns that the concept sequences of these sentences ... are linked to images of objects, or to event sequences or to concepts or concept sequences in other sensory modalities, or to the concepts of other sentences."⁽¹⁾ By singling out particular cognitive competences such as trial-and-error processes, new semantically compatible strings could be established, according to his associative theory.

His theory explains the learning process of different words in different languages that refer to the same object by the same mechanism of association. He gives the example of verbal strings in different languages representing the words

(1) G. D. Wassermann, op. cit., p. 182.

'hund', 'chiens' and 'dogs' which he says become conceptually associated for the learner of a foreign language who learns to associate 'word-concepts' with synonymous words.⁽¹⁾ His approach is consistent with the view adopted by other researchers such as Staats and Staats (1963) and Herrior (1970).⁽²⁾ Staats and Staats, for example, showed that the representational response to a word can be transferred to another word through association.

The idea in Wassermann's language learning associative theory that the representational response to a concept or a word can be transferred to another concept or word through association does not take the affective factor into consideration; the associative theory does not account for the fact that there are certain expressions in certain languages which are either easier or more difficult to express your ideas with, than in other languages, because they have certain emotional significance or special social implications. For a religious person, for example, certain words in certain languages carry a more profound religious or spiritual significance than the same synonymous words in other languages. The word, in this case, has an emotional root or value which differs in its extent from a religious to a non-religious person. In the Questionnaire prepared as a part of this study and distributed among second language learners in a free situation, this essential point has been confirmed. One of the answers to the questions: "Do you consider yourself to be fluent in speaking the foreign

(1) G. D. Wassermann, op. cit., pp. 158, 182.

(2) See: G. D. Wasserman, ibid., p. 182.

language? If not, what do you think the reasons are?" was the following: "I can speak the foreign language fairly fluently, but when I am conversing with someone in the foreign language I have to choose my vocabulary in a particular way because certain words have certain nuances. The nuance is stronger in my maternal language than in the foreign language." Answering the second question: "Do you think that the L₂ words you use in conversing with native speakers of your L₂ language are capable of expressing all the subtleties of the message you want to convey, if not, why not?", the same L₂ speaker said: "No, they are not, perhaps because it is a matter of experience with the word. I dare to say certain things in the foreign language for example that I might be hesitant about with my own native language (swear words). You can't learn to feel those words in the same way you are used to associating them with your emotions when you learnt your first language. Because of my lack of understanding of the subtleties of the language or the feel of it in a sense, and because I am less conscious of the significance of the words or the full social implications of the meaning of the words, I feel less inhibited in using those words."

In the associative nature of the two processes of L₁ and L₂ learning, the present study finds some psychological, neurological, and situational differences. These will be discussed in some detail.

I. Psychological, Neurological and Situational Differences

In the case of L_1 acquisition, especially in the early stages, conditioning and reinforcement processes play a more vital part than they do in the case of L_2 learning by an adult. In the case of the L_1 learner, his whole neurological activities are involved. Beheydt analyzes the differences in the following way. A child assimilating a new word of his native language, has for some time been organizing sensory impressions into a concept before it starts associating the concept with a linguistic form. The sensory impressions may be of various kinds. With words like daddy, boy, and shoe, the sensory impressions are visual stimuli from objects associated with the accompanying auditory stimuli. With words like pretty, all gone, big, good, dirty, and naughty, the sensory impressions are conditioned experiences of comfort or discomfort associated with the accompanying auditory stimuli. With words like the, this, that, there, and here, the sensory impressions are experiences of spatial relations associated with the accompanying auditory stimuli. The common aspect in these sensory impressions is personal interaction with the environment. Hence, we could assert that a new word in the child's language is a verbal synthesis of versatile perceptions. But, of course, when a child uses a word for the first time he proves that he has learnt more than just the appropriate use of a linguistic form; he proves that he has learnt the accompanying act of speaking and speech habit at the same time. So, obviously, the acquisition of

new words involves a very intricate complex of anatomical and neurological activities. By contrast, a foreign language learner assimilates a new word mostly through verbal perceptions. The associations he has to make are mainly auditory - auditory. The new word is not directly related to his interaction with the environment, rather it is related to the verbal context, to the verbal explication of its meaning, or to the corresponding word in his native code. At the best, when visual stimuli are used, associations have to be made between the visual stimuli and the auditory stimuli, but even in that case the learner is not directly dealing with the environment. (1) This point of difference that has to do with neuro-physiological activities involved could in fact affect psycholinguistic functions. In a recent experiment, a number of male and female students aged 18-21 were tested on visual and auditory search tasks, requiring them to locate either a target letter or a target sound. While the men in the experiment did not differ from the females in their ability to locate a sound in a word presented visually, in purely auditory tasks the girls showed a marked tendency to respond faster in all tests; in matching sounds to words they were vastly superior. The data specifically indicated that the common deficiency in spelling by males is entirely due to incorrect perception of auditory mode. Males need, perhaps, far more than girls, an immediate, if not simultaneous reinforcement of the visual cue (the written word) with the auditory signal (the new foreign word or phrase).

(1) L. Beheydt, op. cit., pp. 39-40.

Given the limited empirical study, however, talk in terms of clear, definite differences in this area may well be premature. On the other hand, the evidence which is available does indicate that the above-mentioned factor may partly account for the female's distinct advantage, recognized by a number of researchers, over the male during the adolescent period in the verbal skills.⁽¹⁾

Jespersen has pointed to what he calls a situational "priceless advantage", in the sense that the child hears the language in all situations and under such conditions that language and situation ever correspond exactly with one another. Gesture and facial expression harmonize with the words uttered and help the child to a right understanding. "Here," he says, "there is nothing unnatural such as is often the case in a language-lesson in later years, when one talks about ice and snow in June or excessive heat in January."⁽²⁾

In addition to these neurological and situational differences, a psychological difference manifests itself in the fact that the L₁ learner makes up his universe of discourse in a matrix of object-self-other relationships, at first very dimly sensed but gradually developed. Unlike adult second-language learners, native children enter their general and linguistic worlds with no conception of self-other-object, situation or place. Out of the symbolic processes of interaction, their abilities to discover these entities accelerates, and vice versa. The native spontaneity

(1) See: R. C. Powell, "Sex differences and language learning: A Review of the evidence", Audio-Visual Language Journal Vol. 17, 1, 1979, pp. 19-24.

(2) O. Jespersen, "Language, Its Nature, Development and Origin" (London, 1922) p. 142.

of the child gives us an insight into the effect of property and self-other relationships on his cognitive and linguistic development.

In her analysis of the child's conceptual structure which she schematized in the following figure, Nelson finds a system of relationship between the 'self', others, and objects mediated through the actions upon objects and actions of objects. "Either action upon or action of," Nelson comments, "may be functional, that is, related to the use of the object from the point of view of the child."⁽¹⁾

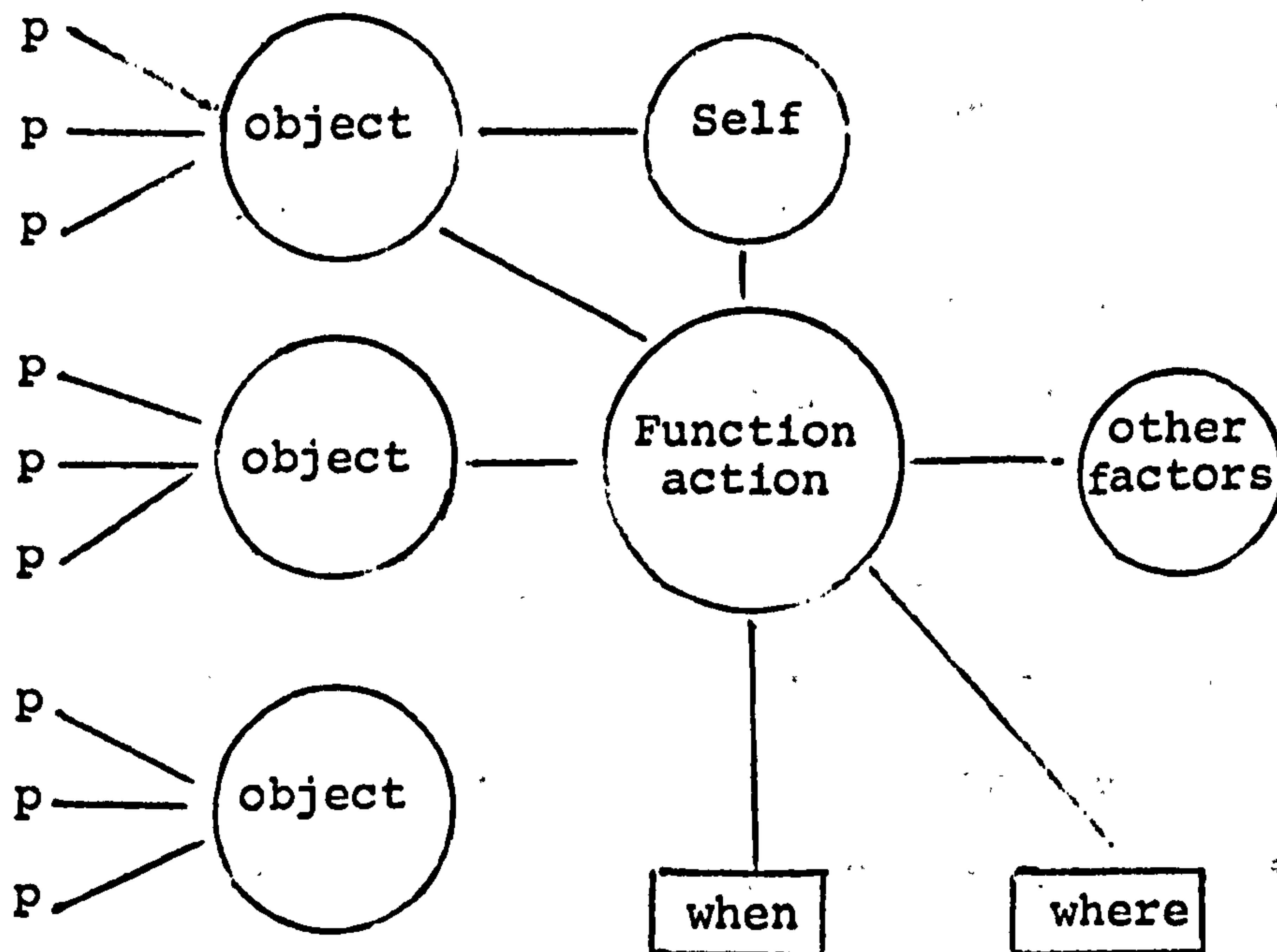


Figure No. 3 :Cognitive network showing relation of object concepts to function and property attributes (p = perceptual property).

According to Nelson, this is the conceptual network that the child is assumed to work with from the onset of his semantic

(1) K. Nelson, "Semantic development and the development of semantic memory", in K. E. Nelson (ed.), *Children's Language* (New York: Gardner Press Inc., 1978) p. 69.

development. It is functionally based and derived from personal experience in the sense that a particular function or set of functions relates self to a set of objects as well as to another person and to a contextualized spatio-temporal specification of when and where. Nelson finds this conceptual network to be "more like the adult's than has sometimes been supposed. The differences observed derive from the necessity of first differentiating a level of lexical usage and knowledge from the conceptual level and then co-ordinating the two."⁽¹⁾ For the grown up L₂ adult learner, his experiences have broadened his horizon so much that no such basis of direct object, self-other relationships is needed in his classroom learning situation. Under the pressing instinctive need to interact with object and with others, the young child L₁ learner's instincts and emotions are brought to the task of learning right from the start. The 'self' in its total entity as an organized, consistent whole both in terms of emotions and thought is involved in the circle of learning in such a way that the conditional responses become the fundamental impact of the 'self'.

McClusky has modified the traditional S.R. (stimulus and response formula) into the modern one (S-O-R) formula in which the (-O-) refers to the person, his self or identity, the special characteristics of which determine how readily and well he undergoes change that results from learning. "The S-R scheme," he says, "works fairly well as long as learning is confined to a simple kind of learning. But it

(1) K. Nelson, op. cit., p. 75.

encounters several difficulties when learning is much more complex... The difficulty lies chiefly in the fact that the raw physical properties of the stimuli are not sufficient to account for the individual differences in response.

Something more called the "intervening variable" is required.

In terms of our formula, the intervening variable is the person, -O-, the one stimulated and the one responding."⁽¹⁾

Introducing the dimension of the 'self' and the concept of the 'S-O-R' formula adds support to the influence of the affective factor, the introduction of which is the major contribution of this study. It also contributes to solving the fundamental psychological problem of language - linguistic meaning, not linguistic structure - which was raised at the Stirling Psychology of Language Conference held in Scotland in June 1976, and for which S. A. Booth⁽²⁾ convincingly proposed a hypothesis. He thinks it can form a theoretical economy that appears to open a route for experimental psycholinguistics to create manageable explanation of the complex phenomenon of 'how to mean'⁽³⁾ via the complex phenomenon of language. The present study agrees with Shield's hypothesis that in order to accomplish this task, the child has to have direct knowledge of his internal states and then see the

(1) H. McClusky, "An approach to differential psychology of the adult potential", in Adult Learning and Instruction (Washington: Adult Education Association of the U.S.A., 1970) p. 133.

(2) See: D. A. Booth, "Language acquisition as the addition of verbal routines", in Campell R. N. and Smith P. T. (eds.), Recent Advances in the Psychology of Language: Formal and Experimental Approaches, Vol. 2, (New York, Plenum Press, 1978) pp. 219-241.

(3) M. A. K. Halliday, "Learning how to mean", in E. and E. Lenneberg (Eds.) Foundations of Language Development (London and New York: Academic Press, 1975)

image of the representation of his behaviour in the eyes of others. So there is the 'self' on the one hand and the 'others' on the other side of the continuum. The process is a two-way one because each image modifies and extends the other. The interpersonal generation of meaning requires the acquisition of a degree of skill in communication which is an index of the child's knowledge of other persons. The child cannot - to begin with - display his ability to make hypotheses about the communicative competence of persons, about their perceptions, concepts, intentions, inclinations, systems of rules, without first discovering his internal status, gradually building up an adequate model of man's concept of man and of the world around him. This two-way process is explained by Shields as follows:

"The child's image of the world is mirrored twice, once directly and again as a representation of the representations of others. His image of himself is also mirrored twice, once with direct knowledge of his internal status, and again by his representation of his behaviour in the eyes of others. Each image modifies and extends the other."⁽¹⁾

Since "the content of the interactions is closely inter-linked with the child's biological status, it is likely that the whole of the early network is soaked in affectivity",⁽²⁾

(1) M. M. Shields, "The child as psychologist: constructing the social world", in A. Lock (ed.), Action, Gesture and Symbol: The Emergence of Language (New York: Academic press, 1978) p. 556.

(2) Ibid., p. 555.

The main focus of the present chapter is to probe this biological dimension.

The present study adopts, therefore, the recent view that conditioning and reinforcement processes are important in early language development and that they represent a fair description of at least some aspects of the acquisition of the earliest responses to language. This hypothesis or style of theory is currently regarded as a much needed bridge between the cognitive and behavioural psycholinguistics. Booth, who adopts such a view in his interpretation of the process, is inclined to believe that it can be a logical compromise which helps solve the shortcomings of the two psycholinguistic approaches:

"When a cognitivist orientation finds this too behaviouristic and a behaviourist orientation finds it too mentalistic, I dare to hope that the theme may be nearer the truth than prejudgements in either camp."⁽¹⁾

Booth's process theory attempts to analyze performance on the basis of the use of a collection of routines and is therefore ideally suited to early developmental studies where the child's information process is so overt. Such a view has the advantage of accommodating individual differences in addition to explaining the process of adult cognition. Booth states that "If we determine what the

(1) D. A. Booth, op. cit., p. 238.

mechanisms are when the system is small and overt, and if the larger, covertly operating system is built on this foundation without total reorganization, then the developmental theory will put the needed constraints on the theory of adult cognition". (1)

Booth's orientation is not purely behaviourist nor is it purely cognitive; it only tips the balance slightly at the early stages to the conditioning-reflex processes rather than to those of the cognitive. This kind of orientation is in harmony with that of Kessen and Nelson who state that:

"In trying to understand the baby at the start of his 18-month-long march toward language, we must be aware not only of his perceptual sensitivity but also of what can be called strategies of the middle range, the mind-building functions that are, on one hand, more limited in scope or range than assimilation and accommodation and, on the other, more inclusive and general than specific reflex activity." (2)

It is important to note that some interior factors that have to do with the 'self', its instincts and emotions, play an essential role in the selection of the routine and all have a motivational condition. This idea has been confirmed

(1) D. A. Booth, op. cit., p. 239.

(2) W. Kessen and K. Nelson, "What the child brings to language", in B. Z. Presocisen et al. (eds.), Topics in Cognitive Development: Language and Operational Thought, Vol. 2, 1978, p. 19.

by Booth in his following remark: "I believe that it would be psychologically even more realistic to allow intensity factors also to operate: salience, recency, degrees of confidence and like variables should affect the selection of the routine with the highest instantaneous priority".⁽¹⁾

Running through a routine in reality or in imagination and articulating the lexical items which are attached to precepts will eventually permit multi-word utterances.

According to Booth, these utterances will be generated without any syntactic processing rules. He believes that the child might acquire a syntactic routine when he is about 2 years old.⁽²⁾ Booth's orientation is adopted primarily because of the current belief that infants use meaning as a clue to language, rather than language as a clue to meaning.⁽³⁾

The rational mind of the infant seems to be predominated by the emotional mind and the primitive mind. It is for this reason that some researchers acknowledge a very early "S-R" phase in language reception.⁽⁴⁾ Harrison not only presupposes that the infant must start with "linguistically sterile devices" - no more than tricks like those a dog does to command, he also argues that it is the later acquisition of a usable collection of such routines by the human infant which is sufficient to generate creative language.⁽⁵⁾

(1) D. A. Booth, op. cit., pp. 227-229.

(2) See: D. A. Booth, op. cit., p. 233.

(3) See: J. Macnamara, "Cognitive basis of language learning in infants", in L. Bloom, Readings in Language Development, (New York: John Wiley & Sons, 1978) p. 396.

(4) See: H. Benedict, Language Comprehension in 9-15 month old infants. Vol. I, 1977.

(5) Quoted by D. A. Booth, op. cit., p. 227.

Very recently, a number of psycholinguists have confirmed this conditioning aspect of learning. As has been referred to earlier, the theory proposed in the present study adopts the "S-O-R" view, where the "O" refers to the person or the 'self' in as far as its instincts and emotions are concerned. This view helps to illustrate the explanatory power of a collection of information processing routines on the basis that the most heavily specified non-linguistic routine is the one which is supposed to interest the child most and therefore motivate him to select the appropriate active linguistic routine, which eventually leads to the acquisition of cognitive routines or vice versa. This idea has been made clear by Brown, who finds in speech an economy available to the child which can provide a first-level categorization of all social reality in terms of a smaller number of attributes. Though language and thought are separable, yet an interaction still exists. The non-linguistic routines help the child acquire cognitive as well as linguistic routines: "Mother might be distinguished from father by the fact that his uncle kisses the one and shakes the hand of the other."⁽¹⁾ The child as a player of the game of speech, as Brown has described him, can practise speech sounds and the parental tutor can selectively reinforce without worrying about the patterning of the sound.⁽²⁾ This stimulus-response process, however, has, to a large extent, to do with the innate affective domain in the infant in order to facilitate and help generate cognition and language. Because it touches the aesthetic, affective

(1) R. Brown, op. cit., p. 387.

(2) Ibid., p. 385.

construction of the 'self', Brown sees in the process a kind of 'game', which is almost always accompanied by enjoyment. The first year of life represents an 'incubation' period, which prepares the infant physically, emotionally, and instinctively for the complex task of learning his first language a preparation that makes his acquisition of it a gradual process of enjoyment that accompanies hearing its phonetic system and testing out his articulatory mechanism to be able to produce it himself. Those who attribute the powers of genius to the child usually forget that behind that genius lies the enchantment of the game when the infant discovers how to associate the human voice with need satisfaction. This incubation period is, therefore, quite essential in paving the way before the infant to open his prematurely closed repertory and make it flexible enough to assimilate new information, linguistic as well as cognitive..

Observations of early language have led to the belief that firstly the description of the role of the mother's spoken language is highly condensed and oversimplified and, secondly, and more importantly, that it is very likely that the mother's spoken words initially are experienced by the infant as tones and rhythms, rather than as words with meanings, "and as such are part of the unprecedented kinesthetic, tactile, visual, auditory, olfactory, and gustatory bombardment that the infant tries to assimilate and organize into schema."⁽¹⁾ Merleau-Ponty⁽²⁾ confirms that this kind of conditioning has an

(1) M. Lewis, "Language, cognitive development and personality" in S. Chess (ed.), Annual Progress in Child Psychiatry and Child Development (New York, 1978) p. 191

(2) Quoted by J. M. Edie, Speaking and Meaning, (Bloomington: Indiana University Press, 1976) p. 85.

aesthetic and affective nature and is based in the early stages of language acquisition on the melody and tones of speech. His view is in harmony with that of Macnamara's, who states that infants have abilities to determine the nature of the act of speech independent of its syntactic form due to the existence of innate tendencies in them to react positively to friendly tones of voice and negatively to angry ones. Macnamara⁽¹⁾ finds that the suprasegmentals play a great role in helping us understand how the child learns to categorize speech acts correctly, and points out that perhaps repeated commands tend to assume an angry tone, and so an angry tone might come to be taken by the child as an indication that he is either to do something or stop doing it. Macnamara asserts that in addition to the role of suprasegmentals an important area of research about which as yet little is understood especially with regard to its relationship to the learning of language is "the high possibility that there must be a set of universal signs, of face, physical gesture, and bodily movement which the child interprets correctly and thus among other things comes to distinguish among speech acts".⁽²⁾ This innate factor is in fact the affective domain with all the richness of its instincts and emotions.

According to Merleau-Ponty, language is acquired not by means of any genuine intellectual operation (which would require an awareness of language as a "sign" of something else), but by means of a kind of "habituation" to others through one's

(1) J. Macnamara, op. cit., p. 398

(2) Ibid, p. 399.

body and its phonetic possibilities.⁽¹⁾ The study of the acquisition of language leads us back, according to Merleau-Ponty, to an activity that is prior to cognition. What primarily impressed Merleau-Ponty, then, in his studies of language learning, was the fact that a language is grasped - through a period of "incubation" which begins to peak around the second year - as "a whole" as a style of expression which imposes itself and contains an "inner logic" that is grasped dumbly and inarticulately prior to any ability to conceptualize the meanings for which it stands or which it enables us to express. One of the things which Merleau-Ponty is most concerned to show is that the child learns a language as an adult learns the style of a hitherto unknown work of art or of music. One first grasps it globally, as a whole, but very vaguely, and then, through further experience, is enabled to discover the articulated parts which constitute the whole and distinguish it from any other. The affective and aesthetic basis of speech is thus given its due emphasis by Ponty's explanation of the acquisition process: "Speaking originates in a personal affective and emotive gesticulation, which little by little, through a play of dicritical oppositions sufficient to distinguish one phoneme, one sound, one word, from another, begins to take an increasingly explicit and determinate sense."⁽²⁾

Studying the origin of the organization of discourse, Guillaum⁽³⁾ finds the first two years of childhood quite essential and the whole process of cognition highly affective

(1) Quoted by J. M. Edie, op. cit., p. 88.

(2) Quoted by J. M. Edie, op. cit., pp. 86-87.

(3) P. Guillaum, op. cit., pp. 134-135.

in nature in which intonation, stress, gesture, all play a significant part. In his book, Language and Learning (1970), J. Britten⁽¹⁾ particularly stresses the place of expressive play-elements in language development. M. Oakeshott, on the other hand, emphasizes the idea that in early language learning "We are moved not by the desire to communicate but by the delight of the utterance."⁽²⁾

The present study, however, does not view language acquisition solely in terms of the affect nor solely in terms of cognition; instead it looks at it in terms of the interaction of both factors. This interactional approach is adopted here because of the concept of "cognitive desensitization" introduced by J. R. Kidd. According to J. R. Kidd⁽³⁾ the concept of "cognitive desensitization" is mainly concerned with lessening or elimination of anxiety. This general term covers a number of affective, or non-linguistic coping mechanisms employed by the learners of both L₁ and L₂ in their learning process - all of which are in fact directed towards reducing the cognitive burden of learning as a result of certain neurological limitations or psychological conflict. In the process of cognition, there are many interconnected factors that are likely to play a major part in determining the nature of cognition. As has been stated in the basic assumption No. 1, put forward at the beginning of this chapter, the problems of cognition are fundamental organism-environment developmental cognitive problems. As Sigel and Cocking put it:

- (1) Quoted by J. W. P. Creber, Lost for Words: Language and Educational Failure (Penguin Books Ltd. 1976) p. 68.
 (2) Quoted by J. W. P. Creber, Ibid., p. 68.
 (3) J. R. Kidd, op. cit.

"In every case, the individuals develop knowledge of the world and their places in it. Thus if we wish to designate these modes of resolution as cognitive conflict mechanisms of defence, as Freudian psychologists would, or coping mechanisms as other personality theorists might, it does not really matter. Underlying all these manifestations of differences in theoretical bias is the necessity to indicate how the individual copes with the contradictions in the environment. Problems are present in the eyes of the individual and for their resolution the individual constructs mechanisms of dealing with them."⁽¹⁾

On the basis of the above-mentioned remarks about the concepts of cognitive desensitization, coping mechanisms, or mechanisms of defence, one can interpret a considerable number of phenomena in the two processes of L₁ acquisition and L₂ learning. Let us take as an example the phenomenon of 'avoidance', a coping strategy frequently adopted by many L₂ learners. Ickennoth (1975)⁽²⁾ regards this phenomenon as a sort of "escape route" which learners resort to when they are faced with the problem of talking about concepts for which their vocabulary is lacking. It is in this case a 'semantic

(1) I. E. Sigel and R. R. Cocking, op. cit., p. 231.

(2) See: H. H. Kleinmann, "The strategy of avoidance in adult second language acquisition", in W. C. Ritchie (ed.) Second Language Acquisition Research (New York: Academic Press, 1978) p. 156.

avoidance strategy' or 'a topic avoidance'. A similar phenomenon has been labelled by Varadi (Cohen, 1975)⁽¹⁾ "message abandonment". Kleinmann attaches great importance to this phenomenon because of his belief that the effectiveness of teaching a second language depends partly on recognizing and dealing with the phenomenon of avoidance. He highlights its significance, referring to the fact that if the avoidance strategy goes unnoticed, we may be fooled into believing that the student has mastered a given point when in fact he has not. "To this, psycholinguistic studies need to be undertaken, examining in detail variables such as anxiety, confidence, and risk taking in order to give a better profile of potential avoiders and non-avoiders."⁽²⁾ The two processes are viewed in the framework of this study, not as passive association processes between visual and auditory patterns, nor as solely cognitive processes, but in fact as a dynamic gestalt of cognitive as well as affective processes.

It can thus be safely stated that to attempt to describe language acquisition or language learning solely in terms of cognition, without taking the affective factor into consideration, is as inadequate and insufficient as attempting to take the opposite direction, i.e. describing such a process solely in terms of the affective factor. Admittedly, there is a conflict on the cognitive level as well as discrepancies between what are called the linguistic factors represented by cognition and the non-linguistic factors on the level of the

(1) See: H. H. Kleinmann, op. cit., p. 156.

(2) Ibid., p. 165.

affect. The interaction between the two represents the final outcome, i.e. of the child's or the adult's linguistic output. Again, we notice here that the concept of the three minds is involved. Since there is a basic human need to resolve the conflict, the rational mind with its own tension system is called forth to help resolve the conflict until a compromise is reached as a sort of an adaptation behaviour which combines the linguistic factors based on cognition and the non-linguistic factors based on the emotional factors into a unified form.

The ideas discussed here are inspired by Sigel and Cocking's⁽¹⁾ suggested modification of Piaget's theory and Clark's⁽²⁾ article on the "non-linguistic strategies and the acquisition of word meaning". Sigel and Cocking do admit that Piaget has spoken of the significance of interest and desire in describing affective concomitants of engagement with objects, events and people, but they think that he has not placed much emphasis on this affective aspect of human interaction, for they believe that its significance is profound. But while they attribute a considerable significance to the contribution of emotional factors in energizing the individuals to continue their engagement in activity, they make it clear that such affective factors are not the sole sources of motivation to construct reality. They explain the friction and conflict that exist as a result of the existence of the two levels - the cognitive and the affective -

- (1) I. E. Sigel and R. R. Cocking, op. cit., pp. 232-233.
 (2) E. V. Clark, "Nonlinguistic strategies and the acquisition of word meaning", in L. Bloom (ed.), Readings in Language Development (New York: John Wiley & Sons, 1978) pp. 433-451.

in the following way:

"It should be kept in mind that the resolution of conflict on the cognitive level is also of import. The discrepancy that is observed or experienced in solving a problem or resolving differences in a situation produces a conflict. There seems to be a basic human need to resolve such discrepancies. To call this emotional would equate emotionality with tension or awareness of difference between two conditions. For our discussion let us keep the two separate. The conflict we are discussing now is cognitive conflict with its own tension system which we conceptualize as different from the affective involvement we have discussed."⁽¹⁾

These ideas are confirmed by Clark's recent study which proposes that children's apparent comprehension of certain words is at first dependent on a combination of their linguistic hypotheses about a word's meaning and certain non-linguistic strategies. He argues that these non-linguistic strategies determine the order of acquisition of certain words until finally the children exhibit full semantic knowledge of the meanings of the word.⁽²⁾

- (1) I. E. Sigel and R. R. Cocking, op. cit., pp. 232-233.
 (2) E. V. Clark, op. cit., p. 433.

In testing the comprehension of the locative terms, in, on, and under by children aged 1;6- 5;0, Clark emphasizes that the result obtained showed that in their attempt to comprehend in, on, and under, young children rely on a combination of linguistic hypotheses about the word meanings and certain non-linguistic strategies. "Furthermore, it has been argued that these non-linguistic strategies probably form the basis for their hypotheses about the meanings of new words." Clark concludes that "... the degree of coincidence between responses based on a non-linguistic strategy and responses based on semantic knowledge may determine the relative cognitive complexity of different linguistic forms and hence determine their order of acquisition".⁽¹⁾

Clark calls such an interaction between the cognitive and the affective factors, or the linguistic and the non-linguistic factors, the "partial semantic hypothesis".⁽²⁾ His hypothesis is based on the combination of partial semantic knowledge and the non-linguistic strategies. He thinks that the partial semantic hypothesis with its non-linguistic strategies might provide a better account than an explanation based on the full semantic hypothesis.⁽³⁾ In fact, the partial semantic hypothesis suggested by Clark has its basis in the interaction between cognitive and affective factors. Clark explains that children show certain biases in their treatment of the world around them that bear no direct relationship to their linguistic hypotheses. "This form of behaviour is traditionally

(1) L. V. Clark, op. cit., p. 450.

(2) Ibid., p. 435

(3) Ibid., p. 435.

referred to as a preference or a response bias and may be present in the child (or the adult) for a variety of reasons."⁽¹⁾

'The preference or a response bias' is in fact a non-linguistic strategy based on the affective factor. Clark gives the example of a young child who is shown a piece of chocolate and a pebble and is allowed to choose one. He will probably always choose the chocolate. The choice would then be independent of the meanings of words used in the instructions to choose; his choice is the outcome of a non-linguistic strategy.

"If the child relies consistently on such preferences, though, it is important to identify them. This is because they could make it appear that the child has understood something when, in fact, his response was simply due to a non-linguistic strategy. This question is a particularly important one where children's comprehension of word meaning is concerned. The child might appear to have grasped the adult meaning of some complex word when he was actually only responding on the basis of a non-linguistic strategy."⁽²⁾

In distinguishing between the two approaches, Clark finds them impossible to separate, however. He hypothesizes that the child's responses are based on the partial meaning with

(1) L. V. Clark, op. cit., p. 434.

(2) Ibid., p. 434.

certain non-linguistic strategies. This hypothesis is a sort of compromise between the two ways of looking at many comprehension studies: (i) the child's responses, including his errors, could be treated as if they were the outcome of his linguistic hypotheses about the meanings of particular words, and (ii) the child's responses could be regarded as the outcome of some non-linguistic strategy.

In the field of L₂ learning, Vigil and Oller (1976) have made explicit claims regarding the source of fossilization based on the interrelationship between these two dimensions: the cognitive and the affective. In their article, an emphasis is placed on pragmatic interaction factors that serve to either "reinforce" or "destabilize" the current rule structures employed by the learner to exchange information (i.e. what they call the cognitive dimension) and to express a notion of self in relation to valued "others" (i.e. what they call the affective dimension):

"Thus the tendency toward fossilization of either correct or incorrect forms is governed by feedback principally on the cognitive dimension. However, if feedback on the affective dimension is not predominantly positive, the feedback on the cognitive dimension will lose much of its force."⁽¹⁾

(1) N. Vigil and J. W. Oller, "Rule fossilization: A tentative model." Language Learning, 26(2), 1976, p. 281.

Schumann's approach seems to centre on the same approach that fossilization is a temporary plateau in second language learning, which may be surmounted by the establishment of higher degrees of integrative social motivation and/or by a decrease in the 'psychological distance' between the learner and the L₂ society.⁽¹⁾

In fact, an active awareness and acceptance of the mutual interplay of the two innate factors, the cognitive and affective on the one hand and the environmental learning facets on the other, offers much greater flexibility in dealing with facts and opinions of first language acquisition and second language learning, and in planning teaching strategies, in the light of the information provided about strategies in language processing.

(1) J. H. Schumann, "Social distance as a factor in second language acquisition", Language Learning, 26, 1976, pp. 135-143.

CHAPTER THREE

The Environmental Factor in
the Realm of the Affect

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Introduction:

The ultimate purpose of stating the environmental differences and similarities between the two processes has been to seek an adequate answer to the following major question around which this whole study has been built: "Since we cannot naturally recapitulate the process of L_1 acquisition in L_2 learning, can we to some significant extent manipulate the environment in which we expect learning of the second language to take place in such a way as to make L_2 learning by adolescents and adults more successful?" An attempt to find a satisfactory answer to this question in terms of the role of the environment is still fraught with difficulties, mostly because an assessment of the value of this role has to be viewed within the interactional framework between the linguistic input on the one hand and the learner's intake on the other. The present chapter will attempt to seek an answer in the context of the interaction between the maturational and functional approaches, with a focus on the area where input variables are to be found, based on observations derived from real facts about parents' overall behaviour in this respect. Lewis, for example, expresses this observable phenomenon as follows: "There is ample evidence that mothers are sensitive language teachers of their children. The sensitive

timing, repetition, and associated pleasurable effects with which the mother uses words for labelling, shaping, etc., all serve specifically to stimulate the development of language." (1) The total outlook on the role of parental input, despite its great significance, has not however yet been shaped up owing to the presence of many unexplored areas that await further research for adequate answers. There are, for example, the questions of: (i) specifying the nature of the linguistic environment, (ii) identifying possible sources of information available to infants and (iii) discovering which of these sources are used. Equal or even greater in qualitative importance is the following unexplored aspect of the environmental factor's influence posed by Dulay and Burt: (2) "When does input - its form, its frequency and its intensity - not affect learning, and when does it exert its influence?" This important question that has to do with the internal world of the learner, i.e. the specific ways his innate, cognitive and affective capacities and inclinations allow him to mediate input, and the external world which has to meet such biological needs, is the central focus of the whole study which has contemplated an answer in the interactional framework of a 'four-factor theory', operating along the lines of innate internal factors and environmental external ones.

- (1) M. Lewis, "Language, cognitive development and personality", in S. Chess and A. Thomas (eds.), Annual Progress in Child Psychiatry, 1978, p. 191.
- (2) H. H. Dulay and M. Burt, "Some remarks on creativity in language acquisition", in W. C. Ritchie, Second Language Acquisition Research, (New York: Academic Press, 1978) p. 68.

Section I

Similarities: Both processes have an environmental basis manifested in the positive role of reinforcement, automatization and memorization

In an attempt not to devalue the importance of the linguistic input, both in the field of L_1 and L_2 learning, Stern raised the following questions:

"... if language acquisition is purely a matter of innate growth in infancy, does it mean simply that language cannot be learned? Does it mean also that we as language teachers are out of business? Or is it that these theories are not beyond dispute and are not completely applicable to second-language situation?"⁽¹⁾

his Article: "Learner Language and Teacher Talk", Corder refers to an element of similarity in the environmental factor between the two processes. Giving emphasis to the environmental factor in the field of L_2 learning, he states the matter clearly in his definition of the process of L_2 learning: "... it is through teachers talking to learners that learners learn language."⁽²⁾ Using the term 'teacher's talk' and not 'teacher's language', Corder makes it clear that the process of interaction with the learner on the part of the teacher should be based on what he calls 'rhetoric', i.e. the

(1) H. H. Stern, op. cit., p. 23.

(2) S. P. Corder, "Learner language and teacher talk", Audio Visual Language Journal, Vol. 16, No. 1, 1978, p. 5.

art of using language effectively as a means of communication. "Thus, teaching a language is a use of language to teach a use of language."⁽¹⁾ According to his definition of the terms 'teaching' and 'learning', teacher-talk is the 'input' to the learner; it represents the data which the learner has to process in order to discover the underlying language system. This, he says, is as true of first as of second-language learning.⁽²⁾ In his statement, there is a strong emphasis on the concept of verbal interaction, which represents indeed the core of the two processes. In L₁ acquisition, Bloom⁽³⁾ has described these verbal interactions between parents and children as teaching behaviours, while Snow⁽⁴⁾ has described mothers' speech as a set of "language lessons". According to Bloom again, "such characteristics of mothers' speech as expansions and redundancy, wherein parents repeat and rephrase their messages until some response or recognition occurs, are effective teaching aids".⁽⁵⁾ All these remarks, observations and statements reflect some elements of similarity between the two processes in terms of the environmental factor which plays a common highly influential role in both. The 'four-factor' theory proposed in the present study has, therefore, adopted the now widely-accepted approach that the study of both processes needs to focus on the verbal interaction in which communication takes place, rather than to view them as entirely autonomous processes.

(1) S. P. Corder, op. cit., p. 5.

(2) Ibid., p. 5.

(3) L. Bloom, "The integration of form, content and use in language development", in J. Kavanagh (ed.) Speech and Language in the Laboratory, School and Clinic, (Cambridge: The MIT Press, 1978) p. 217.

(4) Ibid., p. 217.

(5) Ibid., p. 217.

On such a basis, it can be stated that the current neglect of environmental factors in favour of 'innate factors', i.e. attributing much of the learner's progress to internal processing mechanisms has been unfortunate because of the crucial role that verbal interaction plays in both L_1 and L_2 processes. Automatization is as significant for the L_1 acquisition process as it is for the L_2 learning process. It is through verbal interaction with adults or with teachers that both types of learner acquire a degree of automatization necessary for language development. Automatization, especially in the early stages of learning, plays a very significant role. In fact, reciprocating reinforcement between parents and children is now thought to be of great importance in the development of linguistic communication. A great number of researchers regard reinforcement as an important factor in many learning models, and parental and peer approval and disapproval and success in communication in first language acquisition as variables which act as reinforcers. A process built on this kind of learning by stimulus response helps the L_1 learner acquire a high degree of automatization. To take as an example the linguistic sounds produced by the L_1 learner, it is noticeable that in their acquisition, a reinforcement process is involved. Weir has demonstrated that cooing and babbling are in part imitative, especially of the adult intonation system.⁽¹⁾ Fry, on the other hand, states that while early babbling is mainly unlearned and not dependent on reinforcement, for it is observed even

(1) R. H. Weir, "Some questions on the child's learning of phonology", in F. Smith and Miller (eds.), The Genesis of Language (Cambridge: MIT Press, 1966) p. 156.

in deaf infants, its continued development, he believes, is encouraged by both self-reinforcement and adult reinforcement.⁽¹⁾ Moreover, Bower, in his discussion of the issue of innate and learned linguistic behaviour, argues that "the beginnings of sound discrimination and speech production appear to be genetically programmed, but thereafter language acquisition seems to be entirely a learning process, admittedly complex, but learning nevertheless, and therefore susceptible to reinforcement".⁽²⁾ Halliday suggests operant conditioning as the basis for the emergence of early sound uses. He postulates that the child may utter sounds on a trial-and-error basis and repeat those that elicit the response desired of those to whom he is addressing the sounds.⁽³⁾

Apart from the sound system, the existence in language of a considerable number of sequences which seem to operate perceptually as wholes or as units and which can or cannot be generated by the rules of the grammar, makes the 'rule-governed' approach insufficient to cater for all the complexities of the language concerned. Because of the presence of these units which would be called idioms, proverbs, clichés, or strings of words which habitually go together and cannot be altered, Corder poses the following question which is central to the present discussion about the importance of automatization or learning by memorization:

- (1) D. B. Fry, "The development of phonological system in the deaf child", in The Genesis of Language, pp. 189-190.
- (2) T. G. R. Bower, Human Development, (San Francisco: W. H. Freeman and Company, 1979) p. 240.
- (3) See: T. G. R. Bower, op. cit., p. 231.

"Are ... any sequences of words which regularly occur together in the speech of an individual, whether they can or cannot be generated by the rules of grammar, to be regarded as habits? The answer seems to be 'yes', if you like to call them that. The fact is that all of us develop what I have called sub-routines or 'ready-made sub plans' (these are sometimes called holophrases) which are stored for shorter or longer periods as units of linguistic information, to which we have ready access and which we do not have to plan in detail 'by rule', even though linguistically they may be generable by the rules of the grammar. ... they are an economy measure, a sort of short cut."⁽¹⁾

Halliday explains how in reality a great deal of discourse is more or less routinized; "we tell the same stories and express the same opinions over and over again. We do, of course, create new sentences; we also create new clauses, and phrases, and words ... But it really does not matter whether we do this or not; what matters is that we all the time exchange meanings, and the exchange of meaning is a creative process in which language is one symbolic resource - "perhaps the principal we have ..."⁽²⁾

(1) S. P. Corder, Introducing Applied Linguistics, (England: Penguin Books Ltd., 1975) p. 131.

(2) M. A. K. Halliday, Language as Social Semiotic: The Social Interpretation of Language and Meaning (Edward Arnold, 1978) p. 4.

Clark contends that much of children's speech consists of pre-packaged routines, incorporated from adults' speech without being internally analyzed. On the basis of such findings and conclusions he suggests that an analysis of language learning based on sentence grammars may not capture the essence of the process.⁽¹⁾ Scollen, Clark and Greenfield (1974) have also found evidence of incorporation-rules in the language of the children they have studied.⁽²⁾ Corder finds a similarity in this respect between the two processes. He, therefore, points out that "Habits of speech ... play an obvious part in language acquisition as the most superficial observation of children will show. They also play a most important part in second-language learning."⁽³⁾ Long before L₂ learners know the rules, they generate phrases such as 'how are you?' and 'Would you mind -ing?' an indication that an imitation technique is under way at the early stages which paves the way for learning by reasoning through analyzing these incorporated phrases by the rules which the learner eventually acquires, and which enable him to recognize those phrases as regular or constituent sentences.

Clearly, the study of imitation in general is inseparable from contexts of verbal interaction. It will, therefore, be studied in this chapter with an attempt to reveal its role not as marginal but as significant in helping the L₁ learner lean on the contributions of others in discourse. In the

- (1) Quoted by J. Wagner-Gough and E. Hatch, "The importance of input data in second-language acquisition studies", Language Learning, Vol. 25, No. 2, 1975, p. 305.
 (2) See: J. Wagner-Gough and E. Hatch, ibid., p. 305.
 (3) S. P. Corder, op. cit., p. 131.

context of this study, however, imitation is not viewed as an entirely mechanical process but as one that interacts with the L₁ learner's previous knowledge and the internal factor in terms of the L₁ learner's other speech-processing mechanisms. The constant interaction between the internal variable and the external variable in terms of repetition and imitation of the speech input, its forms and meanings, is a process that eventually leads from automatization to language acquisition. Emphasis on this idea comes from, among others, Stork⁽¹⁾ who states that the native language is acquired as a result of the interaction of two factors: (i) An innate potential to acquire language - something which all human beings possess, and (ii) The environment, which determines the language acquired.

Furthermore, C. Stern and W. Stern have pointed out that in the process of L₁ acquisition:

"... those who emphasized the internal contributions a child makes to its own speech looked for production having nothing to do with imitation... We believe that the proper position is a synthesis of these two opinions. In his form of speech a child learning to speak is neither a phonograph reproducing external sounds nor a sovereign creator of language. In terms of the contents of his speech, he is neither a pure

(1) F. C. Stork, So you want to learn a Language, (London: Faber and Faber Ltd., 1976) p. 3.

associative machine nor a sovereign constructor of concepts. Rather, his speech is based on the continuing interaction of external impressions with internal systems which usually function unconsciously; it is thus the result of a constant convergence."⁽¹⁾

The same applies to the field of L₂ learning. Markman et al.⁽²⁾ have suggested that the two factors have considerable effects on performance and that both account for the data in their study of sentence-repetition task, i.e. (i) a memory factor, depending on familiarity with, and exposure to the language which when operative tend to maintain target features and whole sentences as they were presented in terms of deviance or correctness and (ii) an 'internalized grammar' factor which would produce a tendency to manipulate grammatical structures in a manner consistent with one's own interim grammar. The hypothesized interplay of these two factors would seem to operate to modify the linguistic performance of the L₂ learner. According to Markman et al.'s findings, the use of various elicited imitation techniques may offer one means for exploring the dynamics of the second-language-learning process and its development.

In the framework of the 'four-factor' theory, the strategy of imitation in both processes is not a passive but an active

- (1) C. Stern and W. Stern, "The Language of Children", in A. L. Blumenthal (ed.), Language and Psychology: Historical Aspects of Psycholinguistics (New York: Wiley, 1970) pp.86-8
- (2) B. R. Markman et al., "The use of elicited imitation in search of an interim French grammar", Language Learning Vol. 25, No. 1, June 1975, p. 40.

one directly linked with the internal neuro-affective needs of the individual and with his cognitive competence. A substantial body of data obtained in this field confirms this point. Cook, for example, states that "when children repeat, they do not make parrot-like imitations; instead they process what they hear in terms of their own competence, altering both pronunciation and syntax. It seems that foreign adults are also far from passive and that they too adapt what they hear to fit their own competence".⁽¹⁾ The approach put forward in this study conceives of imitation as influencing linguistic competence, and being influenced in its turn by linguistic competence. It is consistent with the view that imitation is affected by the structure of the material to be learned, and by the gradual analysis of the internal structure of the sequences in terms of the concept of 'structure dependence' referred to earlier in previous chapters.

Bruner too affirms that the young child does not adopt a communicative competence "blindly" from his mother's repertoire of modelling examples, but he recognizes a need or function for a procedure and is handling it crudely by other means before adopting a new, more evolved means. This recognition is a necessary condition for his generating a new communicative hypothesis. "Recognition of a function-to-be-filled ... is what trips off the hypothesis-generating Language Acquisition Device. It seems highly unlikely that its output is a set of syntactic rules for generating only and only those strings

(1) V. J. Cook, op. cit., p. 22.

that are linguistically well formed in the native language." (1)

The interplay of the affective factor in terms of the effects of the emotions and instincts of the learner on his linguistic development with that of the environmental factor shapes up the two processes of learning by imitation and reasoning - a point that is clearly reflected in Hockett's following statement which suggests the fact that the effect of emotions and instincts on language acquisition is even stronger than the effect of the environment as such: "... the fires of childhood competition and the twists of prestige do more to shape a given individual's speech patterns, for life, than does any contact with adults." (2) It can thus be stated that while imitation has a mechanical role in the sense that the L₁ learner does sometimes store and retain stored fragmentations that are partially understood, it also plays an active role that is not random but subject to psychological factors and the accumulative nature of learning. "Rather than trying to reproduce all they hear, (children) seem to put each utterance through some kind of 'filter' that corresponds to what they themselves already know about the structure of their language." (3)

This gives more emphasis again to the concept of "structure dependence" which allows the organization in memory of the constituents of the sentences.

- (1) J. Bruner, "On prelinguistic prerequisites of speech", in R. N. Campbell and P. T. Smith (eds.), Recent Advances in the Psychology of Language, 1978, p. 211.
- (2) C. F. Hockett, op. cit., p. 361.
- (3) H. H. Clark and E. V. Clark, Psychology of Language: An Introduction to Psycholinguistics (New York: Harcourt Brace, Jovanovich, 1977) p. 335.

Imitation as an effective, active mechanism employed by the child helps him even in his discovery or acquisition of the productive syntactic rules of his first language. A hypothesis suggested by a number of scholars is that imitation has a valuable role to play in the acquisition of syntax. Imitation interacts with other mechanisms to help in the process of such acquisition. According to R. Clark, "the important question is no longer whether imitation can help children to acquire syntax, but precisely how a child gradually extracts grammatical information from the repertoire of imitated sequences at his disposal".⁽¹⁾ Clark quotes what Cazden has written in a report on the development of inflections that the process of extraction goes through the stage of imitation first and then proceeds into the stage of gradual analysis:

"The pattern of no use, followed by infrequent but invariably correct use, followed only later by evidence of productivity, characterizes the development of many features of the children's speech. A hypothesis suggested by the data is that the child begins to operate with stored fragments of speech he has heard (not just as immediately preceding utterance), which are somehow tagged liberally for semantic information on the verbal and non-verbal context, and only later are gradually

(1) R. Clark, "What's the use of imitation?" Journal of Child Language, Vol. 4, No. 3, Oct. 1977, p. 341.

subjected to analysis for the acquisition of productive rules."⁽¹⁾

Clark argues that some of the structures may continue to function as unanalysed routines even beyond childhood. Because of the complexity involved, children or even adults may produce a number of utterances whose structure properties they have limited access to. A growing body of opinion supports this claim. In fact, many investigators believe that the regular use of a structure by a child is no guarantee that the structure is part of the child's grammatical competence in the fullest sense. While Brown and Bellugi discard imitation as a major explanation of syntactic development, Brown admits that there are many unanalysed 'chunks' at the earliest stage.⁽²⁾ Many researchers have shown that children imitate speech to a great extent. Others have distinguished between immediate, overt imitation, and delayed or covert imitation. Children are capable of storing representations of adult utterances in the form in which they perceive them, without reproducing them immediately. There is evidence that these are imitations because their form is copied from an adult model rather than constructed by the child from elements. Ryan refers to an apparent decline in the frequency of imitation as children grow older, but Clark⁽³⁾ believes that this may just be an increase in delayed imitation. Clark challenges all the lines of argument against imitation revealing the role it plays

- (1) C. Cazden, *The Acquisition of Noun and Verb Inflections*. Ch. Dev. 39, pp. 433-8. Quoted by R. Clark, *op. cit.*, p.341
 (2) See: R. Clark, *op. cit.*, p. 345.
 (3) R. Clark, *op. cit.*, p. 342.

as one of the central strategies of language development. In her defence of imitation, she tries to interpret a number of familiar characteristics of child syntax as effects of the use of imitation. According to Clark, therefore, the positive role which imitation plays in the acquisition of syntax is manifested in two ways: (i) by making adult forms available to a child, thus helping him to notice these forms more readily when adults use them, thus feeding him gradually with information about syntactic structure, and (ii) enabling him to assimilate their function gradually through use. This idea is emphasized by Brown and Fraser, who state that remembered reduced imitations of adult utterances form a storehouse of information from which children gradually induce the rules of their language. (1)

(1) See: R. Clark, op. cit., p. 354.

Section II

Environmental differences between L₁ and L₂ processes

According to Cook, the difficulty involved in comparing first language acquisition with second language learning is the direct result of the difficulty involved in cancelling out the situational differences, since a partial explanation for these differences between the two processes can be found in the features of the situation. His analysis of the situational differences focuses on the two aspects of "informal" vs. "formal" kinds of learning, i.e. the differences between picking up something without specifically being taught it and learning something in a structured learning situation. In the first situation, the degree of automatization is more abundant, which gives the child an advantage over the adult L₂ learner in facilitating the unconscious acquisition of rules. Given the same opportunity offered to the child, the adult L₂ learner would - it is believed - prove to be even superior. Cook, referring to the findings of Asher and Price (1957), confirms this in his following statement:

"It is interesting to note that in the research where the situational factor is kept constant, the usually accepted advantage of children over adults in second language learning is not cancelled but reversed:

Asher and Price (1957) found that adults were superior to 10 and 14 year-olds who were in

turn superior to 8 year-olds when they were taught Russian by the same teaching technique of the total physical response.."(1)

In a different article, Cook remarks that differences between native children and adults may be the accidental byproduct of teaching rather than the inevitable consequence of two distinct processes.(2)

A major difference which is the by-product of many interactional factors is that in L_1 acquisition, the process of the development of cognitive structures goes hand in hand with that of automatization whereas in L_2 learning which takes place in a formal setting, automatization lags behind. In the case of the L_2 learner, many of the errors he makes are not simply due to lack of attention or memory, but errors owing to insufficient automatization. Such kinds of errors can occur although the rules are understood, i.e. assimilated cognitively, or in addition to errors of wrong assimilation. The process of automatization cannot be ignored for it helps the L_2 learner overcome negative transfer from his L_1 , and it is an integral part of the learning process just as much as learning by reasoning is. According to James, the process of automatization is not an easy one, and the lack of it causes a great number of errors: "It is not true that mistakes are of no significance to the process of language learning. They are evidence of the extent and the difficulty of automatization."(3)

- (1) V. J. Cook, "Cognitive processes in second language learning", IRAL Vol. XV, 1, Feb. 1977, p. 2.
- (2) V. J. Cook, "The comparison of language development in native children and foreign adults", IRAL Vol. XI, 1973, p. 15.
- (3) J. James, op. cit., p. 16.

By comparing the adult L₂ learner with the child L₁ learner, James finds that the adult lags behind in the degree of automatization needed for the acquisition of communicative competence. The advantage of the child over the adult in this situation manifests itself in the fact that by developing cognitive structures at the same time as developing automatization, the L₁ learner enjoys the position where no great discrepancy between knowledge and the ability to use this knowledge is created, as is usually the case with the adult L₂ learner. (1)

Qualitative as well as quantitative differences in the two environmental settings can be taken as key factors which are mainly responsible for impeding the automatization process in an L₂ formal setting from taking place effectively at the ideal level found in the natural L₁ acquisition setting. These quantitative and qualitative differences will be investigated in some detail, with the aim of finding their particular reference to the field of L₂ teaching which will be discussed later, under the heading: "Pedagogical implications".

(1) Quantitative differences:

L. Beheydt⁽²⁾ distinguishes between what he calls quantitative and qualitative differences in the environmental factor in first-language acquisition and second-language learning.

In terms of the quantitative differences in the environmental factor in first-language acquisition and second-language

- (1) J. James, op. cit., p. 15. See also: Wagner-Gough, J. D., Comparative Studies in Second Language Learning, M.A. Thesis (University of California at Los Angeles, 1975).
- (2) L. Beheydt, op. cit., p. 41.

learning, the particular aspect of the ample opportunities for automatization present in normal first-language setting represents in fact one of the most important advantages of the L₁ learner over the adult L₂ learner in a classroom situation. Thus, one perspective that is worth considering in this chapter is that the environment of the L₁ learner is impressive in terms of the quantity and quality of the overall information necessary for linguistic development, information relevant to the skills the L₁ learner will acquire.

This point has received its due emphasis in Hatch's statement:

"It would seem that the child has, indeed, the best of both worlds in terms of language learning opportunity. He gets chances of controlled input with vocabulary made clear from the context in conversations with adults, and he gets a chance to practise 15 repetitions in a row if he wishes when playing with other children."⁽¹⁾

Support for the positive effect of automatization comes from the noticeable phenomenon of a slow rate of language development in L₁ learners owing to the lack of abundant opportunities for verbal interaction with adults in an institutionalized setting. Studies on institutionalized infants and children in the United States confirm this fact. Lenneberg states that children reared in orphanages are frequently

(1) E. Hatch, op. cit., p. 153.

below average in speech and motor development when tested at three but when tested at six or seven are found to have caught up with the control population.⁽¹⁾ Landes agrees that institutional life does in fact leave its mark on speech and language habits, but he says that little is known about the input children give one another and how much parental or adult input is necessary for normal development.⁽²⁾

From observations of real life situations, it has been observed that the quantity of language use overheard by the child amounts to at least ten times the quantity of second-language use overheard by a second language learner in a classroom situation. Several thousand hours are spent by the child using or being exposed to language. In this respect, Kennedy calls the second-language learner a 'part-time learner' in comparison with the L₁ learner. "It is not difficult," he says, "to calculate the many thousands more hours which the first-language learner has in exposure to the language he is learning in comparison with the time spent by second-language learners."⁽³⁾ Giving rough figures as an approximate estimate of the time (measured in hours) needed by both types of learner to learn the language concerned, Jakobovits points out that "... various claims for highly intensive language courses followed by individuals with high foreign language aptitude put the time requirement for the acquisition of a foreign language at between 250 and 500 hours of study (Carroll, 1966).

- (1) E. Lenneberg, Biological Foundations of Language (New York: Wiley and Sons, 1967).
- (2) J. E. Landes, "Speech addressed to children", Language Learning, Vol. 25, No. 2, 1975, p. 376.
- (3) G. Kennedy, op. cit., p. 75.

Compare this figure with a minimum estimate of 3,000 hours for first-language acquisition." This rough figure represents the estimated total waking hours of a child up to age three-and-a-half and taking thirty per cent of that as an estimate of the amount of exposure to language. This comparison is useful for it "highlights the fact that certain aspects of language acquisition process can be greatly accelerated".⁽¹⁾ Some investigators believe that the L₁ learner has so much time to spend on practice and automatization; others think that he is busy with other things and does not for that reason concentrate to the same extent as the adult L₂ learner does. According to Moulton, it is the child who has all the advantage over the adult: "It is a little sad to realize that the child practises so much, because this is something which no adult language learner can ever hope to match - he has too much else to do."⁽²⁾ Newmark and Reibel, on the other hand, find that it is the adult L₂ learner who is more advantageous because of his ability to concentrate his attention which compensates for the longer time needed by the child in his acquisition of his L₁. Thus, according to Newmark and Reibel, the argument that the child has more time to learn the language is difficult to evaluate, since "we do not have reliable information about how much time the child actually does spend in learning a language. It does not appear that the young child spends as much time in language contact as would be required to explain the vast differences between

(1) L. A. Jakobovits, op. cit.; p. 23.

(2) W. C. Moulton, A Linguistic Guide to Language Learning (Modern Language Association, 1966) p. 2.

the language-using abilities of native four-year-old children and those of college students after two years of language courses. The small child is busy with many things - including sleeping and solitary playing - other than language, and it is the rare mother who can bear to keep a one-way conversation going without long breaks during her periods of contact with the child. There is also some question whether the adult might not gain as much from his ability to focus his attention over a period of time as the child gains from longer but less concentrated contact with the language."⁽¹⁾

(ii) Qualitative differences:

The present study attempts to emphasize the point that it is not the quantity in terms of time spent that gives the L₁ learner an advantage over the adult L₂ learner, but the quality in terms of the opportunity to put his knowledge to practical use which matters more. Kennedy puts it this way: "It is not just the amount of time per se which may be critical, but rather how the time is spent. And it is for that reason that it would seem worth considering further the extent to which the conditions facing the second-language learner in a typical teaching classroom usually differ from those in which the first language was learnt."⁽²⁾ In comparing the quality of the opportunity, Newmark and Reibel point out that "the classroom student's knowledge of the language may allow him to do anything with the language except use it".⁽³⁾ These remarks necessitate an examination of the more important environmental

(1) N. Newmark and D. A. Reibel, op. cit., p. 235.

(2) G. Kennedy, op. cit., p. 75.

(3) N. Newmark and D. A. Reibel, op. cit. p. 221.

differences in terms of the qualitative rather than the quantitative element. The following section will discuss the major qualitative differences; the nature of the language input and situations in the two processes, which differ from each other in many respects.

Section III

Nature of the linguistic input in the context of L₁:

Analysing input data in the context of L₁ acquisition, Derwing and Baker have used the term "potential input" in order to emphasize that it is the child who determines what the nature of the data is which he has to learn and retain in memory from the preceding stages. The writers raise two theoretical questions in this connection:

- (i) How does the child manipulate the data available to him at each stage in order to extract, organize, and store the particular information from them that he does; and
- (ii) What external (or internal) factors motivate him to modify or amplify his stored representation of the language at each stage?⁽¹⁾

The writers emphasize that "the primary goal of language acquisition research is to find answers to these fundamental questions. Unfortunately, however, we require a large body of knowledge which is simply unavailable at the present time."⁽²⁾

As a major contribution of the present study, a modified model will be introduced, based on two models of the language acquisition process offered by McNeill and Landes on the one hand, and on the proposed 'four-factor' theory on the other.

McNeill's model gives primary emphasis to an abstract language acquisition device, represented in a simple manner

- (1) B. L. Derwing and W. J. Baker, "The psychological basis for morphological rules", in J. Macnamara (ed.), Language Learning and Thought (New York/London: Academic Press, 1977) p. 93.
- (2) Ibid., p. 110.

in the sense that it does not specify what the corpus of speech or input entails.⁽¹⁾ Landes,⁽²⁾ however, gives focus to this important issue and modifies McNeill's model, differentiating between two aspects: (i) adult linguistic input in the form of a series of filters and (ii) child linguistic intake. The concept of a series of input filters through which any message or input must pass before reaching its destination, i.e. the child, has been analysed from two points of view in Landes' model: (i) syntactic filters and (ii) stylistic filters, governed by both objective and subjective factors.

While the present study gives strong support to the concept of the interaction patterns between the L₁ learner and his linguistic environment suggested by Landes, which introduced the syntactic and stylistic filters, it still finds that these so-called "teaching strategies" of imitation, expanding and modelling do not exhaust all the principles of interaction and teaching as applied by the mother and the L₁ environment as a whole. Questions as to which principles are most effective and under what particular situations to meet these linguistic intake of the child which have been raised by Derwing and Baker, require an understanding of the nature of the child's intake filters. This is in agreement with Derwing and Baker that in this interaction process the child himself is the centre who determines what the nature of the data is which actually get inside the model. The present study, however, gives the environment a possible positive role

(1) See Chapter One, p. 21.

(2) J. E. Landes, op. cit., p. 358.

in speeding up language acquisition and determining the nature of later language acquisition on the basis of an understanding of the child's physical, psychological, and cognitive needs and developments. Such an understanding can help formulate the nature of linguistic interaction established with the child from the early stages on.

Although knowledge about linguistic intake by the L_1 learner is still rudimentary, it is, however, recognizable that to assume a positive role, the input filters should be in harmony with the intake filters. Thus, the input filters in Landes' model should incorporate in addition to the stylistic and syntactic filters two more filters (i) the neuro-affective and (ii) selection filter, and it is here in these two areas that major qualitative differences are to be found between the two processes. The stylistic filters which include "baby talk" in Landes' model may have implied a sort of affective filter, but this should be made more explicit and be given its due emphasis from the point of view of the affective rather than the stylistic filter. The modified model suggests, therefore, the addition to Landes' model of two more elements:

- (i) the affective filter in the form of paralinguistic features: gestures, facial expressions especially at the early stages, baby talk, nonverbal behaviour (smiles);
- (ii) selection filter: which puts primary emphasis on meaning appropriate to the situation rather than on syntax.

Selection Filter:

One of the most basic points that has to do with qualitative differences in the environmental factor concerns selection. As a whole, the verbal input used in language lessons for second-language learners consists of a set of well-formed sentences, and is carefully selected and ordered on the basis of frequency counts and degrees of difficulty.

Corder explains the complaint which teachers often make, that their pupils perform well in practice in class but are unable to use the language to any purpose outside in terms of the distinction between "grammatical and communicative" competence. "They have acquired one without the other."⁽¹⁾

Terrell gives two main reasons which explain the rationale behind such an orientation on the part of the language teachers in their endeavour to teach syntax and grammatical rules. Firstly, their belief that communication, though it might be a more worthy alternative, is impossible to achieve in a classroom situation; therefore, structure is the next best alternative. Secondly, there are teachers who value structure more highly than communication.⁽²⁾

In comparing the richness of the L₁ linguistic environment with the impoverishment of the L₂ one, Kennedy touches on this problem of selectivity which in first language acquisition is directed towards the acquisition of the skill of communication while in L₂ teaching is towards the learning of the

(1) S. P. Corder, op. cit., p. 92.

(2) T. D. Terrell, "A natural approach to second language acquisition and learning", The Modern Language Learning Journal Vol. 62, 1977, p. 338.

syntactic rules. He points out that instead of the rich linguistic environment, the second-language learner is usually fed intravenously. From the incredible structural richness of a language, we, the teachers, select phonological, syntactic, lexical and thematic items; we decide and arrange the sequence of their presentation to the student; we force him to practise the rules we think are being learned... The highly refined and organized sample of artificial language provided by the textbook and the teacher ... typically serve no genuine communicative function.⁽¹⁾ Kennedy thus believes that such an artificially contrived situation leads the L₂ learner into gaining information which he has no need of or interest in, instead of helping him communicate with others in novel situations. Considering this aspect of language input in both L₁ and L₂, Jakobovits wonders whether second language teaching should not replicate the conditions existing under 'natural' language acquisition, and expose the learner to utterances that are grammatically progressive at each stage but short of having the full complexity of well-formed sentences.⁽²⁾ Many findings assert the fact that the corpus of speech in the first-language acquisition setting is shaped by a set of communication purposes and therefore by a set of modifications as well in the sense that "the nature of speech adjustment to the child is through a selection of utterances that are socially and psychologically, as well as syntactically, appropriate; in fact the former appear to dominate, so that

(1) G. Kennedy, op. cit., p. 75.

(2) See: L. Beheydt, op. cit., p. 42.

syntactic simplicity operates only within their constraints".⁽¹⁾
 Newport makes an important comment on this aspect of selectivity by his following remark: "What results from this set of material intents and their associated effects on speech is a corpus which may or may not be helpful for acquisition."⁽²⁾
 However, Newport agrees with Fodor and Garrett, and Fodor et al. (1974) that the psycholinguistic complexity of the sentence is a function of the explicitness with which the surface structure represents the underlying structure, in other words, the degree to which it preserves the deep structure form.
 "... utterances which retain as much as possible of the deep structure form should be easy to process."⁽³⁾ Newport hypothesizes, therefore, that such utterances should as well be the ones which are syntactically simplest for acquisition of the language, since underlying structures must be constructed by the young child on the basis of surface structure clues...⁽⁴⁾

In first language acquisition, parents are aware of the fact that the child ignores complex speech, that he is likely to be incapable of processing long and complicated material due primarily to his short memory limitation; they, therefore, adjust their utterances in such a way as to make them lexically and constructionally simple. Brown et al. (1968) have shown that children get approval for truth value, i.e. meaning, rather than proximity to adult grammatical forms, i.e. syntax. For example, a child could say "That's John's" and be told,

(1) E. L. Newport, "Motherese: the speech of mothers to young children", in N. J. Caselltan et al. (eds.) Cognitive Theory (New York: John Wiley & Sons, 1977) Vol. 2, p. 210.

(2) E. L. Newport, ibid., p. 210.

(3) Ibid. p. 194.

(4) Ibid., p. 186.

"No, it's Harry's". On the other hand, the child could say, "Dat Harry" and be told, "Yes, that's right".⁽¹⁾ Somehow, when the child is vitally concerned with communication, he gradually gets over his difficulties, eradicates errors, and makes steady progress towards adult competence. His parents' attention is focused on the meaning he wants to convey rather than on the form he uses to express that meaning. They are proud of any effort he makes to express himself in words, welcome his phonological innovations, and seldom correct his pronunciation or grammar.

As is evident from the above description, the environmental factor plays a central role in the provision of certain degrees of exposure to certain limited experiences such as modelling, speaking rules, feedback and so on which could explain why L₁ learners often do not consciously understand logical concepts connected with the top level of abstraction in language: the area of syntax.⁽²⁾ "In Piaget's view, all of these limitations are ultimately attributable to a single fact: Concrete operations-stage children concentrate on the 'here and now' rather than on how these realities might fit within the total matrix of logical possibilities; in short, they lack a complete combinatorial system."⁽³⁾ In the framework of the present study, however, the limitation of young children in shifting concepts as flexibly as older ones is also attributable to a lack of relevant experience reflected in the form of incomplete modelling strategy on the part of

(1) See: G. Kennedy, op. cit., p. 72.

(2) See: Whitehurst and Zimmerman op. cit., p. 106.

(3) Ibid., p. 90.

parents, which limits younger children's ability to deal logically with the two dimensions of meaning and complex form simultaneously.⁽¹⁾ By concentrating mainly on one dimension, i.e. meaning, the parents facilitate the acquisition of the skills of communication, which is the central task of the L₁ learner in his language acquisition process. The parental attribute which is clearly noticeable in the whole process of trial and correction is extremely helpful to the child in his perception of speech and his categorization of the non-linguistic world. Seeking meaning and his parents' attention, the child in turn tends to ignore excessively complex or unfamiliar speech and to rehearse or repeat utterances which are slightly beyond his current productions. Such kind of interaction between child and parents may function to restrict the complexity of the speech forms from which the child must learn the language, "thus a new picture of language acquisition situation begins to emerge: both the mother and the child filter the corpus so that the speech used by the child is appropriate in its complexity to what he is learning."⁽²⁾

This sort of qualitative difference between the two processes which is a basic one might be labelled communication versus structure orientation. In a second-language-classroom-teaching setting, a preference is usually given to the structure objective rather than to the communication skill objective. One reason for this kind of orientation is that

(1) See: Whitehurst and Zimmerman op. cit., p. 78

(2) E. L. Newport, op. cit., p. 178.

communication cannot be learned or acquired by adults in the classroom, thus the language teacher limits his job to teaching his L₂ learners how to express their intentions rather than to guiding them in the central task of what they ought to say. In comparison to the task of the parents, the second language teacher's task, as he often views it, is to teach an alternative set of schemata, i.e. the rules of formation. As a result of this policy, the majority of the L₂ learners do not attain minimal level of communicative competence, since a very limited time is spent on actual communication, while most of the efforts are directed towards exercises and drills to teach morphology and syntax, a process that slows down automatization instead of speeding it up. In fact, the immense amount of grammatical complexity usually taught at school is not in any real sense absolutely essential for the acquisition of communicative competence.

Macnamara uses the terms 'informal' and 'formal' learning to refer to the two different phenomena of: (i) the child's unconscious acquisition of rules, and (ii) the adult's conscious or explicit learning of them. He points out that "though we cannot be certain that infants are unconscious of all the linguistic rules, they certainly must be unconscious of many of them."⁽¹⁾ While these rules or formulae are never taught to infants, they are often explicitly taught to adults. Macnamara finds similarity between the way a young child acquires these rules and the successful learner of a

(1) J. Macnamara, op. cit., p. 62.

second language who has a great many implicit rules which he is unable to formulate. Macnamara finds the difference between formal and informal learning an important issue that merits close attention, and that although it is possible to learn a language without learning conscious rules, yet the explicit rules can probably be of great help.

Because of the importance of the issue at hand, Terrell finds it urgent that "every teacher must make peace with himself or herself on the question of communication versus structure".⁽¹⁾ If the process of L₂ learning is to replicate that of L₁ acquisition, then communicative competence should be the immediate goal and in that case a large lexicon with very general syntax rules must be established from the very early stages of learning, allowing the grammaticality of the utterances to increase with time and experience. "Once the student is communicating, however imperfectly, the teacher can then direct the materials and experiences toward the development of the student grammar (interlanguage) in the direction of adult grammar."⁽²⁾ It is on such grounds that he suggests that if we are to raise our expectations for oral competency in communication we must lower our expectations for structural accuracy.⁽³⁾

Another basic suggestion comes from Corder representing, in his view, "the only pedagogical solution available at the present time". It is "to ensure that the language data to

(1) T. D. Terrell, op. cit., p. 339.

(2) Ibid., p. 327.

(3) Ibid., p. 326.

which the learner is exposed be presented in context, i.e. as part of continuous discourse or dialogue, and in a situational context, if necessary simulated".⁽¹⁾

Closely connected with this qualitative environmental difference is the difference in what is called 'linguistic tolerance'. A child acquiring his first language is allowed to produce semi-sentences. He constructs and destroys or modifies a series of grammars, as if he were putting up or pulling down a series of bigger and better tents.⁽²⁾ Some parents even tend to talk to their children by attempting to imitate their baby talk. In this respect, children are not inhibited and utter ill-formed sentences. The second-language learner, on the other hand, is discouraged from using semi-sentences. Teachers usually demand that the sentences of second language learners should be grammatical from the very beginning, a demand not imposed on L₁ learners. Cook explains how, unlike the L₁ learner, the L₂ learner is not expected to make interim hypotheses about the language he is learning; instead, he is assumed to learn the rules of native competence one by one. He is expected to build up his grammar as one would build a house, brick by brick.⁽³⁾ As a result of this policy, the L₂ learner is corrected all the time. With many learners, these corrections tend to become inhibiting and hinder the development of their communicative fluency. The logical implication of this would be that language teachers should be tolerant with

(1) S. P. Corder, op. cit., p. 92.

(2) V. J. Cook, "The analogy between first and second language learning", in IRAL Quarterly, Vol. VII, 3, 1969, p. 209.

(3) Ibid., p. 209.

regard to the ill-formedness of their L₂ learners, especially in practical conversation, and at the early stages of learning.

Neuro-affective Filter:

In L₂ learning, the language input is not so closely related to the learner's inner world, while first language acquisition is organically linked with the world of the child and is directly related to the child's personal perceptual and emotional interaction with the environment.

In the context of the present study, what counts more for children's superiority over adult L₂ learners is this affective factor which forms what some writers call the children's "instinctive avenue to success". The comparative lack in the L₂ learning process of a high degree of the affective variable which the L₁ acquisition process is usually associated with, constitutes a great underlying obstacle, which hinders the smoothness of the learning process from taking place. The lack of an affective element in L₂ learning is concomitant perhaps with an emotional resistance to learning it. "Thus the younger learner may not be as efficient a learner, but he may be less resistant to the learning process."⁽¹⁾ Lipsitt and Reese highlight the importance of the affective filter in their following remark about language development: "... it would probably be correct to assume that smiling and other expressions of affection on the part of the mother have much to do with perpetuating the conversation."⁽²⁾

(1) A. D. Cohen, "The case for a partial or total immersion education" in A. Simoes Jr. (ed.) The Bilingual Child, 1976, p. 70.

(2) L. P. Lipsitt and H. W. Reese, op. cit., p. 101.

In the early stages of language acquisition in particular, reinforcement helps the child develop vocal play and linguistic exploration. If a rewarding event takes place, perhaps in the form of a smile or hug from the parent, then the to-be-learned word is more likely to be uttered by the child. The new orientation towards reinforcement, however, is that "... it is not necessary to reinforce the learning indefinitely because the newly acquired expression opens up other rewarding expressions."⁽¹⁾ The foundation of the process should be well established on an affective basis, for although "there appears to be a powerful, initially innate but increasingly plastic push in the infant (and the mother) to "share" attention, and although the child does not "become" communicative as a result of reinforcement or imitation or any extrinsic determinant"⁽²⁾ it is very likely for such an innate tendency not to develop adequately, given environmental conditions that lack sufficient reinforcement built on an affective basis. Having an innate communicative tendency is not enough, nor is it enough to provide mere exposure to language without linking this linguistic exposure with a sort of affective experience directed to the child and shaped according to his emotional and instinctive needs, abilities, and the situation at hand. At first infants babble because it amuses them to listen to themselves, but after a few weeks this is no longer sufficient. The infants require stimuli from their parents. They want to be understood. Fortunately, their care takers do follow

(1) L. P. Lipsitt and H. W. Reese, op. cit., p. 105.

(2) J. Bruner, op. cit., p. 210.

their children's own rhythm of thought and development rather than, strictly imposing on them their own adult ways of thinking and talking. It is in such an affective context that communication starts to grow and develop. Sroufe, among others, regards the infant's engagement of the observable and manipulative world not as merely a cognitive engagement but as an affective engagement as well. "As does cognition, affect organizes the infant's behaviour. In many ways affect is the meaning of a transaction with the surround for the infant." (1) Studying emotion and cognition together forms an integrative, organizational view of development. The relevance of the affect for language development has been illustrated by Chapman, who states that "the central puzzle of our paradox is this: How do children who cannot yet use grammatical cues to meaning appear to understand so much of what is said to them?" He gives an example of a comprehension strategy used by the child as a sort of non-linguistic response strategy in the sensory motor stage which is characterized by an absence of a full linguistic knowledge, in the sense that the child neither understands nor uses words. The example reveals the appearance of a language comprehension on the child's part which is directly linked with an affective situation that functions as a sort of short-cut for arriving at sentence meaning "without full marshalling of the information in the sentence and one's linguistic knowledge". "No" spoken sharply can have the effect of startling infants, interrupting

(1) L. Alan Sroufe, "Socioemotional development", in J. O. Osofsky (ed.), Handbook of Infant Development 1979, p. 462.

their activity, and possibly causing them to cry; but so can "Yes" spoken in a similar fashion."⁽¹⁾ The example reveals the close correlation between emotions and the ability to comprehend the meaning of a sentence or even to distort it.

Support for the importance of the affective factor and its impact on language learning comes from the unusual case of Genie, the deprived child who could not acquire speech owing to loss of adequate stimulation. It is interesting in this context to quote Curtiss' comments on this case in her psycholinguistic study of Genie whom she called a Modern-day 'Wild Child'.

"Experimental deprivation has been a principal source for determining the validity of claims regarding critical periods and appropriate stimulation ... Such experiments on humans, however, have not and cannot be carried out for obvious reasons. "Experiments in nature" - tragic alterations of the normal human condition not purposefully induced by the scientific community - provide us with our only means of studying such hypotheses re human development. Genie is such an experiment in nature, providing us with a

(1) R. S. Chapman, "Comprehension strategies in children", in J. K. Kavanagh (ed.) Speech and Language in the Lab. School and Clinic (Cambridge: The MIT Press, 1978, p. 311.

case of "experimental" deprivation with which to examine the validity of Lenneberg's claims."⁽¹⁾

According to Curtiss' study, Genie, as was reported by her mother, had begun to speak close to the time she was confined (20 months), and then to have stopped shortly after her confinement. The child did not suffer from mental retardation since she began to talk when she was about 20 months. Genie actually did speak some words before her confinement at the age of 20 months, thus when she began her years of confinement she was a cognitively and linguistically normal child. As reported by Curtiss, Genie's confinement did allow for the development or retention of some cognitive/perceptual abilities, but did not appear to permit the development of language. "One may assume", Curtiss comments, "that Genie is a test case for Lenneberg's hypothesis in that she emerged from isolation without having received adequate linguistic stimulation during the period from age 2 to puberty."⁽²⁾

Lamendella⁽³⁾ who in his analysis of the concept of the critical period hypothesis for primary language acquisition has touched on the case of Genie, believes that as a result of this particular case many people in the field at large have now the tendency and inclination to disprove

(1) S. Curtiss, Genie; A Psycholinguistic Study of a Modern-Day 'Wild Child' (New York: Academic Press Inc., 1977) p. 208.

(2) Ibid., p. 208.

(3) J. T. Lamendella, "General principles of neuro-functional organization and their manifestation in primary and nonprimary language acquisition", Language Learning, Vol. 27, No. 1, June 1977, p. 169.

the existence of a critical period for language. Lamen-
della gives a number of explanations why such a conclusion
is unwarranted, the most important of which are: Firstly,
there is reason to believe that Genie's 20 months exposure
to language could have satisfied the requirements of her
maturing neurolinguistic systems for speech input from the
environment. Secondly, there may well have been some
(minimal) exposure to language during Genie's confinement,
perhaps enough to prevent structural atrophy of her neuro-
linguistic systems and to sustain some degree of receptive
verbal capacity.

A similar case is that of a hearing child whose deaf
parents did not teach him sign language. The child by
age 3:9 had learned little spoken language although he had
had frequent exposure to it with neighbourhood children and
by watching television. Sachs and Johnson, who have reported
this case, point out that although the child had frequently
heard normal speech, "these sources tended to be impersonal
and the speech was not directed to him as an individual;
he had not so much been spoken to as he had overheard speech.
Perhaps because he was retarded in his speech development,
the children with whom he played tended to avoid addressing
him directly".⁽¹⁾ The consequence was that the child did
not learn much language despite frequent exposure to it.
Newson, among others, confirms this fact out of his belief

(1) J. Sachs and M. L. Johnson, "Language development in
a hearing child of deaf parents", Paper presented at
the international symposium on first language acquisition,
1972, Florence, Italy.

that it is only by being continually involved, as a participant actor, within an almost infinite number of sequences of interpersonal involvement and negotiations with caretakers that the baby is finally brought into the community of language. "In short," he says, "it is only because he is treated as a communicator that he learns the essential human art of communication."⁽¹⁾ In fact, from very early on the infant is treated as a conversational turn, even though the caretakers carry the entire conversation alone. This is perhaps one of the most important qualitative advantages of the environmental factor in L₁ acquisition.

The research on social and affective influences on the overall development of language behaviour in both girls and boys presents interesting material in support of the role of the affective factor in this respect. Some studies on the sex differences in speech carried out on boys and girls who grow up in seemingly identical surroundings indicate that the differences could be the direct result of being nurtured in totally different social-emotional climates. In a study of interaction between three-month-old infants and their mothers, more vocal-verbal communication occurred between mothers and daughters than between mothers and sons. "Mothers vocalized more to their female infants, and the female infants vocalized more in response to their mothers than the mother-infant son pairs."⁽²⁾ It is believed that

(1) J. Newson, "Dialogue and Development", in A. Lock (ed.) Action, Gesture and Symbol: The Emergence of Language (New York: Academic Press, 1978) p. 42.

(2) M. Lewis and R. Freedle, "Mother-Infant Dyad: The cradle of meaning", in P. Pliner, L. Karmar and T. Alloyway (eds.) Communication and Affect, Language and Thought (New York: Academic Press, 1973).

for the first two years of life, girls are the object of more looking-at and talking-to behaviours. Furthermore, observation of spontaneous interaction between mothers and their two-year-old children in a play situation revealed that mother-daughter pairs have greater tendency to communicate through conversation. Mother-son pairs did not show the same need to maintain conversation and build dialogue.⁽¹⁾

The toys girls and boys play with can also create different verbal climates which either encourage and stimulate verbalization or have a neutral influence.

"Girls' play includes a central dependence on dolls and talk in imitation of mother. In echoing the mother, girls are likely to stimulate more conversation from her and engage in considerable conversational interaction with her. Boys, despite their inclinations, may see that verbal play is frowned upon. It is not "manly" to talk with dolls and use the manner of talk of the mother."⁽²⁾

Obviously, it is difficult for a baby to progress as well as might be if he does not have enough individual attention. In fact, there have been a series of investigations of the effects of deprivations of that type of

- (1) E. B. Thoman, P. H. Leiderman and J. P. Olson, "Neonate-Mother Interaction during breast feeding", Developmental Psychology 6 (1972): pp. 110-118.
- (2) D. McCarthy, "Some possible explanations of sex differences in language development and disorders", in P. Pliner et al., (eds.) Communication and Affect, Language and Thought (1973) pp. 155-160.

psychological experience in infancy on the overall development of institutional babies. In one of these studies, where interest was focused on a group of children who had entered an institution in their early months and had remained there to about the age of three and had then been transferred to foster homes for care, the children showed more speech retardation than the control group which consisted of children whose total life experience had been with foster families.⁽¹⁾ In other respects, it was concluded that the institution children were less secure, more isolated from other people, and less able to enter into meaningful relationships. They also more frequently showed problems such as restlessness, hyperactivity, inability to concentrate, lack of popularity with children, fearfulness and excessive craving for affection. They were shown by experiment to be deficient in drive and to be marked by an unusual degree of apathy or emptiness of emotional response. As for language, it was evaluated with the Williams, McFarland and Little Language Achievement Scale (15). The following results were obtained. "It is definite that when first tested, the foster home children were superior to the institution children in three phases of language that were evaluated: (1) speech sounds employed (no credit for babbling), intelligibility of speech, and level of language organization. The total language achievement score is the sum of these three scores."⁽²⁾

- (1) See: W. Goldfarb, "Effects of psychological deprivation in infancy and subsequent stimulation", The American Journal of Psychiatry Vol. 102, 1945, p. 19.
- (2) Ibid., p. 24.

The vocabulary of the children was measured by the picture vocabulary test of the revised Stamford-Binet intelligence examination (Form L) (14). This test consists of eighteen pictures of common objects which the children are asked to identify. Most of the objects are within the range of experience of the institution as well as the foster home children; for example, shoe, clock, chair, bed, table, hand, tree, cup, etc. The score is the number of objects that the child is able to identify. The institution children were inferior in vocabulary in both first and second tests.

The extent of language retardation in the institution group is further clarified by the comparative number of children in institution and foster home groups who failed the picture vocabulary test completely and received zero scores. In the first test a majority of the institution children (60%) could not identify one object. Fewer of the institution children demonstrated complete failure after the experimental placement experience, but there were still more complete failures in the institution group than in the foster home group. "It is recalled that some of the objects were very much within the range of the institution children's experience, then the explanation for the language delay appears to reside in the limited amount of language communication between the institution children and adults who would be in a position to supply the appropriate names. In addition, the fact that four of the institution children were

still unable to name any of the picture objects even after nine months' growth and a seven months period in a foster home, where the isolation factor no longer prevailed, is probably expressive of the passivity and related learning deficiency in the institution children."⁽¹⁾

These results give more support to the four-factor theory, which gives the cognitive factor in both L_1 and L_2 learning processes its positive role but adds to it the role of environmental stimulation in the context of its interaction with both the innate cognitive and affective variables. Goldfarb confirms this very idea of the interaction of the personality with its environment in any learning process:

"The language deficiency of the institution children is a specific factor retarding them. The continued presence of the language handicap six months after placement (present study), four and a half years after placement (3) and eight and a half years after placement (5) gives further evidence of the imperviousness of the children's personalities to environmental stimulation - an imperviousness which is explained by the passivity and apathy of total personality in the institution child."⁽²⁾

(1) W. Goldfarb, op. cit., p. 26.

(2) Ibid., p. 31.

The conclusions reached are that the effect of deprivation of babies in an infant institution can be profoundly detrimental to their psychological growth in general and to their language development in particular. The question may be logically asked as to whether these conclusions can be of any help in giving a satisfactory answer to our key problem, i.e. the confusions that typify the nature-nurture controversy raging in the field of first and second-language learning. In part at least, it may.

(a) L₁ linguistic input is directly related to the child's personal perceptual and emotional environment:

From this point of view, Beheydt describes the second-language input as "abstract and artificial as it does not involve the learner personally and it does not bear on his motorical and perceptual interaction with reality".⁽¹⁾ This shows that there is no linkage between the second-language input and the L₂ learner's personal experience. The child, on the other hand, interacts with his small social environment on the basis of a strong neuro-affective foundation, where his whole organism including his emotions and instincts are involved. Jespersen has pointed to this important phenomenon in the acquisition of L₁: "... what the child hears is just what immediately concerns and interests him, and again and again his own attempt at speech leads to the fulfilment of his dearest wishes, so that his command of language has great practical advantages for him."⁽²⁾ In second-language learning, the language input with its main concentration on syntax

(1) L. Beheydt, op. cit., p. 41.

(2) O. Jespersen, Language, Its Nature, Development and Origin (London: 1922) p. 143.

does not touch on the affective domain of the L₂ learner in terms of his inner feelings and emotions. In the first-language learning context, however, the motivation from the very early linguistic stages, i.e. the stage of single-word usage is associated with the self and with "significant others". Rodgon et al. find that the child may have learned from his interaction with his 'inner world', 'object world' and 'others world' that: (i) parental utterances require responses, (ii) he can utilize his own verbal ability to find out about the world, and (iii) he can get his parents to do things for him.(1) Thus his attempts at speech rest on this foundation of an interesting, affective experience revealed in Guillaum's following statement:

"To ask at what point a child understands his name is to ask a strange question: one would have to describe in detail the succession of reactions which the name evokes. First, it is a commonplace summon: it is the attitude, the look of whoever says it that makes the child feel that it has something to do with him. It is a synonym of words like: Attention! (here), look over here. It is the signal of interesting experiences for an action in which he is to participate."(2)

- (1) M. M. Rodgon et al., "A multi-functional approach to a single word usage", Journal of Child Language, Vol. 4, No. 1, Feb. 1977, p. 37.
- (2) P. Guillaum, op. cit., pp. 134-135.

Lewis offers an example from observations of his own (son), who from the tenth month has frequently said "a..a..a" in a tone of delight in a variety of situations in his attempt to attach the meaning of a sound to an object. Lewis comments on the evolution of the syllabic utterances "fa:fa" from "a..a..a":

"It is clear that in replacing his primary expressive "a..a" by "fa" - his adaptation of the adult word (flower) - the child is making a dual advance. He is able to communicate his delight more effectively, to draw his mother's attention to the flowers and not to any other object in the room. At the same time, he is enabling himself to link his feeling of pleasure with the flowers, to bring this feeling more closely into relations with flowers."⁽¹⁾

This type of psychological experience in infancy has a considerable effect on his acquisition of his native language; it can provide constant stimulation for him to like to respond verbally to his parents in a way that is pleasing to them. Thus, the existence of the affective element and the nature of this element are the cornerstones of the development of language. It is not enough to say

(1) Quoted by N. K. Denzin, Childhood Socialization: Studies in the Development of Language, Social Behaviour and Identity (Washington: Jessy Bass Publishers, 1977) pp. 62-63.

that the child is born with a language acquisition device (LAD) without acknowledging the fact that this 'LAD' in order to function has to be given environmental stimulation. The importance of an attentive responsive adult is vital, not only to set a pattern for the baby to follow, but also to provide stimulation and an appreciative audience. Usually, "(the child) is sung lullabies and talked to. His motor and verbal responses receive immediate recognition. He is encouraged to babble, to form sounds and then words.." (1) In fact, talking to a small baby in a tender, loving manner, by parents is such a commonplace practice, we often forget that from the baby's learning point of view, this is extremely valuable. In the ordinary way, speech is a continuation of the learning to communicate in which the baby has been involved for a long time: eye contact, exchanged smiles and scowls, shouting for attention, and all the gurgling and testing of the voice which precedes the first baby words.

From a neurological point of view, the subject of conversation addressed to young children anticipates the nature of the children's world in the sense that the words used seem to have the most immediate relevance to what the children need or want to talk about, i.e. the 'here and now'. The criterion adults seem to use can be characterized by what Brown called "level of utility": the judgement that one word is more likely to be useful than another in the child's own utterances. (2) This is largely determined by the situation, for in L_1 acquisition and in the case of L_2 learning, it is

(1) W. Goldfarb, op. cit., p. 18.

(2) See: H. H. Clark and E. V. Clark, Psychology and Language, (1977) p. 323.

the relation between the sentence and the situation rather than the sentence alone that determines what one understands and how easily understanding takes place. Failure to process a linguistic construction by the L_1 learner partly reflects the fact that his parents did not make the function of their sentences content match that of the situation in which the input occurs. Meaning for the child arises from experience. In Brownsford's words, "it is the immediate situation that first determines the significance of the input for the language learning child".⁽¹⁾ According to Chapman, the situational context may serve as a sort of external short-term memory, allowing children to construct longer utterances in contexts than they could remember without mnemonic support.⁽²⁾ Furthermore, Bloom emphasizes the value of the immediate context, and points out that "if speech addressed to children did not make sense relative to events in the immediate context, then it would, quite simply, make no sense at all. Such speech could not be a model for learning".⁽³⁾ A distinction can be made between two major kinds of context: (i) the 'context of situation', and (ii) the 'context of culture' to which the first is usually generally relevant.

(b) L_1 speech is closely tied to actions and to extra-linguistic contexts:

Parents usually talk to their young child only about those things which are present to the senses, things which are happening or which the child or they themselves are doing.

(1) See: R. S. Chapman, op. cit., p. 321.

(2) Ibid., p. 321.

(3) L. Bloom, op. cit., p. 217.

Without a good many surrounding clues, an infant cannot guess what his parents are talking to him about. All of these, together with the parents' facial expressions represent significant clues to their meaning or intentions which enable the child to determine what that meaning is and to use it as a key to the code his parents use to express their meaning. Such a close connection between the linguistic and extra-linguistic contexts is not so much dominant in L₂ learning in a formal situation. It is for this reason that some researchers believe that the strategies of acquiring L₁ cannot be used for acquiring L₂, since L₁ acquisition is associated with what is known traditionally as concept formation, i.e. in the process of his maturation, the child associates his L₁ linguistic forms with objects and concepts in the outside world.⁽¹⁾ The strong association between L₁ forms and concepts in the extra-linguistic reality has been shown in Rodgon et al.'s findings which give account to individual differences in the field of L₁ acquisition based on environmental factors as well as biological factors. In their rich data, they show why an L₁ learner in the one-word stage is more advanced or more lagging behind another owing to the presence or lack of the tendency to talk about action as the complexity of speech increases. In one case of their study,⁽²⁾ that of a girl named Sherry, they have found that the less frequent use of action-relations in her single-word speech reflected both an individual tendency to talk less about action and the replacement of this action by more advanced syntactic means. Such data partly

(1) See: S. A. Balhough, "The Place of Lexis in Foreign Language Acquisition", M.A. Thesis, Univ. of Sheffield, (1976) p. 56.

(2) See: M. M. Rodgon et al., op. cit., p. 38.

account for individual differences in the rate of linguistic development in first-language acquisition and point the way to how an L₁ learner can be communicatively-orientated, affectively-orientated or syntactically-orientated - a significant point that will be discussed in some detail in the last chapter which will view it in the context of its pedagogical implications in the field of L₂ teaching.

The existence of classes of routines labelled cognitive, linguistic, and non-linguistic provides an account of the acquisition of linguistic competence by an L₁ learner at the early stages of acquisition. "With (the) accumulation of (linguistic routines) in parallel with the increasing numbers and stricter specifiability of non-linguistic routines, the linguistic routines become increasingly co-ordinatable according to their internal characteristics by the constraints of the linguistic, social and physical environment to which they are adapted and by their processor's perceptual and motivational states." (1)

It has to be remembered, however, that the process of acquisition is not a passive one. The active role which children play in the acquisition of meaning manifests itself in their building of plausible interpretations for words and utterances from what they know and from cues in the immediate context. By assuming that there is a reasonable connection between what the speaker says in a particular situation and the situation itself, they form the hypothesis that language makes sense in context. Since they also assume that adults

(1) D. A. Booth, *op. cit.*, p. 237.

are trying to communicate with them about the 'here and now', the children rely heavily on the here and now in working out the meaning of words and utterances. They draw on their conceptual knowledge about the objects, events, properties and relations that are familiar to them in mapping their concepts and the language.⁽¹⁾ As Bloom puts it, "the integration of form, content and use and the continuity of behaviours in the transition from infant behaviour to language behaviours result from such conceptual capacities and contact between linguistic and non-linguistic categories".⁽²⁾

The conceptual knowledge that children have accumulated about 'object world', 'people world', 'language world' together with the non-linguistic knowledge, i.e. context or situation - help children in forming new semantic and syntactical hypotheses and in modifying old ones. In the framework of the 'four-factor' theory, however, L_1 learners, and this applies also to L_2 learners, vary in their choice of conceptual information when they form their hypotheses about the meanings of words. Many emotional and instinctive factors play a role in such a choice and in picking out certain features that strike them personally more than other cues. An important link with the affective factor is thus noticeably present. McCarthy emphasized the idea that "there is a strong affective element in the early speech of children, for they seem to speak first about things they feel strongly about such as wishes, commands, treats, and other emotionally toned responses. ... Only somehow later, 3 to 4 years of age, do remarks associated with situations emerge".⁽³⁾

(1) See: H. H. Clark and E. V. Clark, op. cit., p. 248.

(2) L. Bloom, op. cit., p. 215.

(3) D. McCarthy, "Language development", in A. D. Adon and W. F. Leopold (eds.) Child Language: A Book of Readings, (Englewood Cliffs : Prentice-Hill, 1971) p. 110.

CHAPTER FOUR

The Cultural Factor in the
Realm of the Affect

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The purpose of this Chapter is to pay close attention to the similarities and differences in the acquisition and learning of the rules of conversation, the so-called "speaking rules" between the two types of learner, the L_1 and the L_2 ; to point out how these speaking rules differ from one linguistic and cultural setting to another; and to investigate the extent of the difficulties usually encountered by L_2 learners in their learning of the specific L_2 speaking rules of the language concerned according to how much they resemble or differ from those of their L_1 .

Section I

The Similarities Involved:

- (i) Both processes have a cultural basis.
- (ii) Both processes are built on the interaction between the cultural factor and the affective/cognitive factor.
- (iii) Both processes are fraught with difficulties.

(i) Both processes have a cultural basis:

In the words of Henry Lee Smith Jr., language forms a 'seamless web' with culture; neither can be considered without the other.⁽¹⁾ This statement shows the necessity of taking a cultural perspective in both fields, L_1 and L_2

(1) Quoted by M. S. Kirch, "Relevance in language and culture", The Modern Language Journal, LIV, 6, Oct. 1970, p. 24.

acquisition and learning. This can be made clear by quoting from: (i) Hymes, who refers to the importance of studying the cultural basis in the field of L₁ because of his belief that varying cultural attitudes regarding the value and functions of language, or its varieties and styles, may have an effect on the nature and rate of language acquisition; and secondly (ii) Corder who emphasizes the importance of such a study in the context of the learning and teaching of second languages.

Hymes has discussed the importance of determining not only how children learn what to say, but also how they learn what not to say and when and where. He feels that the cultural environment is an extremely important factor in language acquisition, and has stated that "Language development in children can be expected to vary with any social, cultural or ecological conditions affecting the make-up of the household".⁽¹⁾ In addition, Jespersen points out that "learning a language implies among other things what you may not say in the language, even though no reasonable ground can be given for the prohibition".⁽²⁾ From the above remarks it appears that language acquisition evolves out of learning how to carry on conversations, and that the environmental patterns of interaction provide an important setting for role-taking opportunities.

In the study of how the relation between the individual conceptual system and society's cultural system is developed,

- (1) D. H. Hymes, "Linguistic aspects of cross-cultural personality study", in B. Kaplan (ed.), Studying Personality Cross-culturally. (New York, Row, Peterson & Co., 1961) p. 342.
- (2) Otto Jespersen, From "Language: its nature, development, and origin", in A. B. Adon and W. F. Leopold (eds.) Child language: A Book of Readings, 1971, p. 60.

or perhaps constrained through language, Corder finds it essential in the context of the learning and teaching of second languages to consider the problem interlinguistically and cross-culturally. "This means," he says, "asking the question: do the evident differences between the cultures of the communities make it difficult, or impossible, for people to learn the language of another society?"⁽¹⁾ Putting the question again in a rather different manner, he says: "Is the difficulty of learning another language directly related to the degree of difference to be found between the two cultures with which they are associated?"⁽²⁾ The answer, according to him, is "up to this point, a qualified yes, in as much as certain concepts are more readily codifiable in one language than in another".⁽³⁾ Referring to the difficulty of the task rather than to the impossibility of it, he says that despite the fact that learning a second language does in fact involve some degree of recategorization, the task is not an impossible one since it "does not involve learning a new world view".⁽⁴⁾ The elements of cultural similarity are also referred to by, among others, Lambert, who talks about what he calls the "psychic unity" of mankind, a concept built on the basis of common innate qualities and common cultural experiences which can be taken as a clue to the interpretation and understanding of universal phenomenon of language learning. The major outcome of this psychic unity is a pattern of similarity in language learning. In his challenge to dislodge or to loosen deep-seated beliefs that culture and

(1) S. P. Corder, op. cit., p. 72.

(2) Ibid., p. 72

(3) Ibid., p. 72.

(4) Ibid., p. 73.

language have profound influences on cognitive processes, Lambert questions the notion that culture or language affects basic cognitive structures and the related notion that culture affects the structure of personality. (1)

A similar idea has recently come from Richard Hoggart, the assistant director of Unesco, who believes in the "common qualities", the ribs of the "universal human grammar" that link all men because of our "common experience" and "common sorrows". (2)

The cultural elements in common and the elements of difference between the two languages concerned, makes the learning of L_2 a sort of an acquisition of 'cultural flexibility', in the sense that if the L_2 learner aims at communicating effectively via his L_2 , he should be sensitive to the social and cultural aspect of language use and how they differ from those of his L_1 . Expectations and interpretations are likely to differ in many linguistic areas: speaking volume and intonation, situations requiring set formulae, the role of silence, how information is organized and shared. In fact, knowledge of when to talk and when to keep silent, how loud to talk and with what intonation, what constitutes a polite request and what a refusal, how to initiate a conversation and how to end one, when to interpret an utterance literally and when to take it as a formulaic convention, and so on - such knowledge constitutes what is called in sociolinguistics "the rules of speaking".

(1) W. L. Lambert, "Culture and Language as factors in learning and education", in F. R. Eckman (ed.) Current Themes in Linguistics, (Washington: Hemisphere Publishing Co. 1977) p. 16.

(2) Ibid., p. 18.

In the study of the interrelationship between language and culture, the latter may be both extrinsic and intrinsic in its relation to language. Those idiomatic expressions or words of the L₂ that are almost impossible to translate literally into the L₁ because of their cultural background are regarded as intrinsic elements of the language. What is extrinsic can be studied independently of that language, i.e. through other media.⁽¹⁾ Cultural units of meaning which differ from culture to culture and from language to language are called by Lado "elementary meaning units" (EMUs).⁽²⁾ Lado gives an illustration of these elementary meaning units from Spanish. In Spanish a semantic distinction is made between some parts of the human anatomy and parallel parts of animals. 'Leg' is pata for an animal and pierna for a person. 'Back' is lomo for an animal and espalda for a person. "No translator," says Lado, "could render pierna and pata as human leg and animal leg and have his work accepted."⁽³⁾ It is because of this interrelationship of language and culture that one-to-one equivalences can rarely be established between words and expressions in two different languages. In a somewhat similar way, Arabic makes a semantic distinction between some of the maternal and paternal relations of an individual: /xa:l/, for example, is the maternal uncle, whereas /gam/ is the paternal; /xa:lah/ is the maternal aunt, /gamh/ is the paternal aunt. Hocking gives some examples from French and German which indicate how the meanings of words are culturally determined.

(1) See: J. O. Gauntlett, Teaching English as a Foreign Language (London: Macmillan, 1961) p. 9.

(2) R. Lado, Language Teaching: A Scientific Approach, New York: McGraw-Hill Inc. 1964, p. 28.

(3) Ibid., p. 28.

The intimate French 'tu' or German 'du' arises not from rules but from human situations. Moreover, the French custom of clasping hands is so much associated with their language in such a way that "when a Frenchman hears himself greet you with 'Bonjour!' his right hand automatically shoots forward and clasps yours. He does not shake your hand, he clasps it. Of such folkways is culture, the referent of language." (1)

At all levels, understanding the essential EMUs of the second language helps provide the learner with a clearer conception of the language and its culture, making his use of the language more effective. To minimize the interference from the similar yet different EMUs of the L_1 of the learner which may colour or obscure those of the L_2 , these necessary EMUs should be made understood through the L_2 rather than through translation.

These few examples of cultural differences illustrate how the cultural situation of a particular utterance is so significant for the understanding of its meaning in full. Meaning is to a great extent determined by the interaction that exists between a language and the culture it represents. This explains why the L_2 learner confronts a cultural barrier, especially if the L_2 culture is radically different or remote from that of his L_1 . Thus it can be said that some differences in cultural meanings across language constitute a problem in learning that language.

(1) E. Hocking, "Technology in foreign language teaching", MLJ, LIV, 2, Feb. 1970, p. 85.

Hymes⁽¹⁾ refers to what he calls "norms of interaction", or those rules governing how people relate to one another verbally in various situations, i.e. the conventional formulae manifested in their language. When two cultures, for example, agree in having a formula for a particular situation, there is still a difficulty for the L₂ learner in that he should be cautious not to assume that he can use them in exactly parallel situations. Applegate gives the following example of a formula for a particular situation which if translated literally wouldn't produce exactly the same effect. "There is a formulaic equivalent to "thanks" or "thank you" as an expression of gratitude in most languages. But in France or Germany, if you accept the offer of a cup of coffee with merci or danke, just as you would say "thanks" in American English, you won't get the coffee. "Thanks" here means refusal; to accept you must say something like "please" or "I would like some". In Japanese and Korean, a question is more polite when phrased negatively: "Wouldn't you like more tea?". In accepting his offer, an American would say "Yes (I would like more tea)." But the Japanese and Korean, and the Filipino too, would respond with "No", logically for "No (it is not the case that I would not like more tea)."⁽²⁾

The same writer cites several examples of the differences in norms of interaction. The following is one referring to the expected pattern of offer and acceptance as a typical and

(1) D. Hymes, "Models of the interaction of language and social life", in Gumperz and Hymes (eds.), The Ethnography of Communication (Holt, Rinehart and Winston, 1972) pp. 63-64.

(2) R. B. Applegate, "The language teacher and the rules of speaking", TESOL Quarterly Vol. 9, No. 3, Sep. 1975, p. 276.

general characteristic of the Mediterranean and Middle Eastern rule that an offer is never accepted the first time. "In Greece, politeness may require at least four offers. In the exchange below, notice how firm both parties sound:

Host: Why don't you have a piece of baklava?

Guest: Thanks, I have just eaten.

Host: Have a piece of baklava!

Guest: I couldn't possibly.

Host: I insist, just one piece!

Guest: I can't.

Host: Come on. I've got all this baklava: what am I going to do with it?

Guest: Well, I'll have a little then.

If you don't want what is being offered, then you refuse each time maybe five or six times, until there is no further offer."⁽¹⁾

The social function of language was not given its due emphasis either in the cognitive or in the environmental linguistic approaches that prevailed in the field of linguistic studies. In this respect, Ausubel et al. have stressed the idea that to interpret the problem of language acquisition by explaining it in terms of cognition, i.e. that the L₁ learner can arrive single-handed at valid grammatical forms has given rise to grave difficulties, simply because it detracts attention from the social character of language.⁽²⁾ On the other hand, confining language acquisition to the influence

(1) R. B. Applegate, op. cit., p. 277.

(2) D. P. A. Ausubel et al., Educational Psychology: A Cognitive View, (1978) p. 374.

of the environmental factor in terms of its restricted form, i.e. parental input, has also been subject to criticism by Brown who states that: "In the child's learning, parental speech is usually the ultimate attribute. Beyond this there will usually be physical or social attributes of the greatest importance."⁽¹⁾ In the terms set forth by Halliday, a child's learning of his mother tongue is in one sense "a process of progressively freeing himself from the constraints of the immediate context - or, better, of progressively redefining the context and the place of language within it - so that he is able to learn through language, and interpret an exchange of meanings in relation to the culture as a whole".⁽²⁾

It appears then that the more recent current orientation in the study of language takes a different viewpoint on the matter and attempts to interpret language functionally. Halliday emphasizes the need to attempt to look into language from the outside, from the standpoint of the social order in contrast to the prevailing attitude which proceeded to interpret linguistic processes from the language outwards, putting main emphasis on the structural functions to the exclusion of the social context of language. He says: "... When social man comes into the picture, the ordering disappears, and even the concept of rules is seen to be threatened."⁽³⁾ The structure of sentences and other units is thus derived from their functions. In explaining how to understand

- (1) R. Brown, "The Original word game", in L. Bloom (ed.), Readings in Language Development (New York: John Wiley & Sons, 1978) p. 389.
- (2) M. A. K. Halliday, Language as Social Semiotic (London: Edward Arnold Ltd., 1978) pp. 124-125.
- (3) Ibid., p. 4.

linguistic structures in functional terms, Halliday emphasizes the point that the process should be from the outside inwards, interpreting language in reference to its place in the social process. "This is not the same," he says, "as taking an isolated sentence and planting it in some hothouse that we call a social context. It involves the difficult task of focusing attention simultaneously on the actual and the potential, interpreting both discourse and the linguistic system that lies behind it in terms of infinitely complex network of meaning potential that is what we call the culture."⁽¹⁾

On such grounds, the study of language development has shifted from a focus on how the structure of language is acquired, to issues of meaning in terms of semantics, speech acts and communicative competence.

On the basis of such criticisms of the previous approaches it becomes clear that talking about the role of the cultural factor in the L_1 and L_2 processes is essential, for it means taking a view of language as a social institution, "a body of socially conditioned or culturally determined ways of behaving".⁽²⁾ As long as linguistic theory is concerned only with the linguistic dimension of language, i.e. the internal structure of sentences or the "linguistic rules", the sociological dimension of language will not be given enough concern. As a matter of fact, the so-called "speaking rules" of the language which should be learned and discovered by both L_1 and L_2 learners to acquire "communicative competence"

(1) M. A. K. Halliday, op. cit., pp. 4-5.

(2) See: S. P. Corder, op. cit., p. 28.

in the language concerned should come to the centre of attention. There is a lack of developed theories of communicative competence, a point emphasized by, among others, Corder who states that: "Until such theories of communicative competence are much better developed the teacher will have to work on a principle of hit-and-miss exposure, hoping that the learner will discover on his own the discourse rules or the "speaking rules" of the language as we have called them."⁽¹⁾

Adopting a social or cultural approach to language implies being concerned with the problems of its communicative function in different situations. Both the child acquiring his mother tongue and the adult learning a second language must, in addition to developing the ability to produce and understand grammatical utterances, be able also to know when to select a particular grammatical sequence, the one which is appropriate to the context, both linguistic and situational that conforms to the rules set by the particular cultural setting.

(ii) Both processes are built on the interaction between the cultural factor and the affective/cognitive ones:

Despite the importance of attempting to account for the development of language in terms of the social matrix, the process of learning cannot be captured by solely tackling it from a cultural perspective because culture is closely embedded in an affective context. In a very recent article (1979) about "the development of thought and language in infancy", Gratch argues that: "While it seems intuitively obvious that we must

(1) See: S. P. Corder, op. cit., p. 92.

come to focus on socially common objects and share our knowledge of them, it is not obvious that the process of knowing is best captured by a social metaphor. The infant, like the artist and the scientist, does much of his exploration and problem-solving on his own."⁽¹⁾ The present study adopts a psychosocial perspective as an alternative because the two perspectives do not constitute separate fields of study, instead they interact at the same time with neurological and cognitive variables. Gratch puts the whole concept this way:

"To investigate what a person knows about what he remembers involves communication with other, with self, and to study what a person knows about how he communicates with others involves memory and other cognitive processes."⁽²⁾

In the framework of the 'four-factor theory' the process is interactional in nature because of the multidimensional factors involved: cognitive, affective and neuroaffective, environmental and cultural. This interactional characteristic of the linguistic process is revealed in Bloom's analysis of the core of the process which is not focused on the particular routes the child takes but rather on "the contact between linguistic and non-linguistic categories and the dyadic exchange between child and adult in the crux of the process whereby such contact occurs".⁽³⁾ The concept of communicative competence is built on the appropriateness of

- (1) G. Gratch, "The development of thought and language in infancy", in J. O. Osofsky (ed.), Handbook of Infant Development. (U.S.A., John Wiley & Sons Inc., 1979) p. 457.
 (2) Ibid., p. 439.
 (3) L. Bloom, op. cit., p. 216.

the linguistic utterances to the non-linguistic categories in the culture concerned. "It is just as much a matter of competence in language to produce appropriate utterances as grammatical ones. It is thus that the concept of communicative competence has come into being." (1)

The present study lays high emphasis on the interactional nature of the process of the acquisition of 'communicative competence', stressing the crucial role played by the neuro-affective factor in particular. If heavy communication demands, for example, are put by the L₁ cultural setting on the young L₁ learner, they result in hindering the language acquisition process rather than in accelerating it. What Richards and others call L₂ errors resulting from 'strategies of communication' and 'strategies of assimilation' are viewed in this study as errors resulting from a lack of an understanding of the neuro-affective needs of the individual L₁ learner on the part of the cultural setting. Richards points out that "Under communication strategies we may include errors that derive from the fact that heavy communication demands may be made on the second language, forcing the learner to mold whatever he has assimilated of the second language into a means of saying what he wants to say, or of getting done what he wants to get done. The learner may simplify the syntax of the language in an effort to make the language into an instrument of his own intentions. Errors resulting from such efforts may be attributed to strategies of communication." (2)

(1) S. P. Corder, *op. cit.*, p. 4.

(2) J. C. Richards, "Error Analysis and second language strategies", in J. W. Oller and J. C. Richards, Focus on the Learner (New York: Newbury House Publishers, Inc., 1975) p. 127.

In the above statement, an interaction between the neuro-affective, cognitive and cultural factors is quite obvious. The interaction is equally mutual in the sense that heavy communicative demands may result in limitations in the learning of a vast amount of a linguistic repertoire, and limitations of linguistic repertoire may limit the L₂ learner's acquisition of communicative competence. Adding Corder's following statement to that of Richards, the picture of the interaction process will be more complete:

"A speaker's freedom of social action is dependent upon the range of his repertoire. His lack of a command of some code or style will seriously limit his freedom in certain directions. We may, for example, refuse an invitation to dinner just as much because we don't command the appropriate style of speech as because we don't know which knife or fork to choose. Limitations on our linguistic repertoire may produce social insecurity in just the same way as limitations in other aspects of our social skills." (1)

Again, the interaction between the affective, cultural and cognitive factors is implied in the following explanation of the causes of L₂ errors which are referred to as errors resulting from strategies of assimilation: "Errors attributable to

(1) S. P. Corder, op. cit., p. 64.

the learner's attempts to reduce the burden of what he has to assimilate may be closely related (to errors attributable to strategies of communication), and they may be referred to as strategies of assimilation." (1) In the context of L₁ acquisition, the cultural pressure put on the L₁ learner negatively interacts with his affective/cognitive capacities in a way that impedes the natural development of language acquisition.

It has been reported that generally speaking a higher number of males than females have speech defects or speech problems, such as stammering, poor articulation, aphasia. According to B. W. Eakins and R. G. Eakins, a generally accepted estimate is that male stammerers, for example, outnumber females by about 4 to 1, and that stammering is more severe among boys than among girls and lasts longer for boys. The hypothesis they give as an interpretation of the causes of the sex differences in stammering is in some way related to cultural pressure:

"...There may be cultural pressure for boys to match girls' performance. Pressure to talk as soon as girls, when they are not ready, may cause some boys to begin to speak defectively. As they grow older, the defects may persist." (2)

The writers report the result of the study of one investigator who tried to find out if stammering is related to cultural

(1) J. C. Richards, op. cit., p. 127.

(2) B. W. Eakins and R. G. Eakins, Sex Differences in Human Communication (Boston: Houghton Mifflin Company, 1978) p. 93.

pressure by surveying a society where performance demands on females are increased and those on males are decreased. The result indicated that there were proportionally more female stammerers from matriarchal than patriarchal homes. Conversely, there were more male stammerers from patriarchal than matriarchal homes. (1) The influence of the cultural pressure on the emotions is very obvious, a further support to the concept of the close interaction that exists between the cultural and the affective factors and the impact of that interaction on the acquisition or learning of languages. The following statement illustrates this point: "If male children develop physically, socially, and linguistically at a slower rate than females, they meet unequal competition that causes frustration in verbal situations. Consequently, they may show more insecurity, hesitancy, and inhibition in their speech." (2)

To clarify the importance of the interrelationships between the two factors, the cultural and the affective and their impact on language acquisition, Bloom by putting these two perspectives together, clearly illustrates a malfunction in the use of language by L₁ learners whom she has labelled insecure or 'emotionally disturbed', and who refrain from using their L₁ language although they know the form and the content. In other words, they don't put their knowledge of the language into communicative use with others as they should if it has to be assumed that there is a continuity of behaviours in the course of their language development in the three components

(1) B. W. Eakins and R. G. Eakins, op. cit., p. 93.

(2) Ibid., p. 93.

of language: form, content, and use.⁽¹⁾

In describing those children, Bloom remarks that "... there are children, often labelled emotionally disturbed, may talk very little or may talk often but primarily in monologues. Their language disorder can be represented as a weakness in the use component. Thus one can describe certain language disorders as weakness in one of the three components, form, content and use."⁽²⁾ It seems to be the case that these children have not adequately acquired what is called 'communicative competence' which according to Osser⁽³⁾ includes two elements in its development:

(i) the ability to analyse the listener's role characteristics; and

(ii) the ability to use one's linguistic resources in appropriate communicative strategies.

These two elements are lacking in the linguistic behaviours of those insecure children: they cannot communicate with others although they share with them a set of 'agreed' ways of behaving. They cannot put their knowledge of the two components of language, i.e. form and content into social use; therefore, the knowledge which they possess is insufficient to permit them to relate to others, to interact with others, or to co-operate with others. Their verbal behaviours cannot be described as a sort of communicative behaviour in the social sense of the term.

(1) L. Bloom, op. cit., p. 250.

(2) Ibid, p. 250.

(3) See: M. A. K. Halliday, op.cit., p. 94.

Directing their attention to what Piaget refers to as social and affective interaction, Sigel and Cocking point out that the "term social corresponds to two very distinct realities in the affective sense. First, there is the relation between the child and the adult which is the source of cultural transmission ... through education and verbal interaction. Second, there are also the social relations among the children themselves".⁽¹⁾ The writers explain how true reciprocal co-operation develops among children who, as a result, become capable of understanding and expressing interest and concern toward others. This development is a necessary step towards making language a social event and not merely to be used as a monologue, but as a verbal activity occurring between a hearer and a speaker, who both perform linguistically. In order for language to be a product of the social process, conversation with others is a must because "language arises in the life of the individual through an ongoing exchange of meanings with significant others".⁽²⁾

In his functional approach with its concentration on the social rather than the mental processes involved in the learning of L, Halliday interprets the process as the individual's mastery of a behaviour potential, in the sense that "... language is a form of interaction, and it is learnt through interaction; this, essentially, is what makes it possible for a culture to be transmitted from one generation to the next."⁽³⁾

(1) I. E. Sigel and R. R. Cocking, op. cit., p. 83.

(2) M. A. K. Halliday, op. cit., p. 1.

(3) Ibid., p. 18.

The four-factor theory is alert to the possibility that gaps in communication or a violation of the speaking rules can take place as a result of an environmental or social neglect of the L_1 or the L_2 learner's cognitive, and neuro-affective needs. In the framework of the four-factor theory, the result of the interaction of the external environmental factor at large (i.e. parental and cultural) in its success or failure to meet the overall basic needs of the language learners is reflected in the learner's success or failure to acquire the three components of language: form, content and use.

Many unsocialized persons manifest their lack of appropriate social functioning linguistically as well. Typically language has many social uses - teasing, greetings, information seeking, argument, etc. Thus the verbal interaction, or in other words, the social use of language requires the conversational participants to perform and be sensitive to a range of social behaviours in accomplishment of the actual spoken message. As a conversational partner, one has to have a sense of obligation, whether verbal or non-verbal, in order that normal communicative interaction takes place. Acknowledgement of having received a message, whether it contains an assertion, question, command, or summons, etc. is an integral part of the conversational interaction. A great number of persons who suffer from a sort of social and psychological deprivation do manifest a more or less extremely limited sociolinguistic behaviour, and appear to be conversationally incompetent. Generally speaking, verbal interaction

with such people is almost always controlled by the person talking to them, not by them. 'Genie' can be taken as one example. "Her failure to perform many of the behaviours requisite for successful conversational interaction is most probably a result of her social and psychological deprivation. Genie grew up in an environment devoid of verbal interaction. Never or practically never having witnessed the performance of these sociolinguistic behaviours, she did not develop them." (1)

An important finding of recent research (Keenan, 1975) has shown that the elements of conversational competence develop during and are part of what a normal child acquires during the course of language acquisition. Curtiss' comments on this finding that "if this is so, one would expect individuals with developmental social and psychological disturbance to display problems in this area. Recent research suggests that this may be so." (2) She gives the example of autistic children who evidence inability to answer or even acknowledge yes/no questions addressed to them and display general and pervasive impairment in the social and communicative functions of language.

In a different example, Curtiss distinguishes between a communicative competence and a linguistic competence, showing that "communicative competence may be a separate aspect of linguistic functioning, and, therefore, not dependent on most other linguistic abilities, but rather on the

(1) S. Curtiss, op. cit., p. 233.

(2) Ibid., p. 233.

absence of social and/or psychological disturbance".⁽¹⁾

She refers to the point that communicative competence as one aspect of language behaviour can develop in the absence of a great deal of linguistic competence. "Working with Down's syndrome adults, Sabsay (1975) has shown that these individuals may possess a surprising degree of communicative competence, even though they lack much grammatical ability."⁽²⁾

It is interesting to note how the environment plays a positive or negative role in the development of communicative competence. According to Piaget, language is a symbolic system for representing knowledge; the main emphasis for explaining the onset of language should, therefore, be put on the child's interaction with his physical environment. Such interaction with his 'object world' enables the infant to acquire 'prespeech cognition'. There is now, however, a strong tendency to shift the main emphasis for explaining the initial developments of language from the child's interaction with his 'object world' to an equal or even greater emphasis on the child's interaction with social environment, i.e. 'people world'. It is by this latter sort of interaction that the infant acquires "prespeech communication". The latter emphasis is not merely confined to that of representing knowledge but it also extends to that of communicating and sharing knowledge. In fact, the environment plays an important part in the formation of individual differences which can be noticed right from the very initial stage of language development. In terms of the opportunities the environment

(1) S. Curtiss, op. cit., p. 234.

(2) Ibid., p. 234.

provides for the development of either 'prespeech cognition' or 'prespeech communication' some children become either predominantly prespeech communicators or rely more heavily on prespeech cognition. (1) Karmiloff-Smith points out that the child is usually engaged in constructive interaction with four worlds: (i) 'object world'; by acting on his surroundings, by touching, grasping, looking at, and maintaining the objects around him that help him to represent events and objects in memory; (ii) 'people world'; (iii) inner world, and (iv) language world. In his unconscious or partly conscious discovery procedures of these four worlds, the young child interacts with his small social and physical environment. By depriving him of a relatively strong socio-affective experience, the child would most probably become unwilling to take part in oral communication.

In describing the socialization process which is always a two-way process, a form of communication, and the part played by language, Bernstein has developed a theory of the relation between social class, language, and socialization. He postulates the idea of the linguistic codes corresponding to two family types, "positional families" and "personal families". He refers to their importance in the sphere of leading to different perspectives of society and self. Elaborated codes, for example, allow the speaker to verbalize his subjective intentions. They involve complex planning for they arise where the intentions of other people cannot be taken for granted and the speaker has to concentrate on the

(1) Karmiloff-Smith, A Functional Approach to Child Language, (Cambridge/New York: Cambridge Univ. Press, 1979) p. 12.

experience of others rather than himself. Restricted codes by contrast do not facilitate expression of subjective intentions. The pattern of the language is predictable. But a restricted code is not necessarily restricted in its vocabulary. Elaborated codes may only arise in situations where personal relations require that meanings have to be elaborated and made precise and explicit. In person-centred families which work through psychological qualities rather than position, speech becomes a major vehicle for discipline and control. Motives, intentions and meanings have to be verbally elaborated as personal interaction is subject to negotiation and qualification. In position-centred families control is exercised by reference to the clear-cut rights and responsibilities which go with positions. Reference is to what children should do because they are small children. There is little verbal elaboration of the personal responsibilities of those involved.

Stubbs, in his discussion of Bernstein's codes, urges caution in interpreting the findings of the above-mentioned social class differences in language use. He, among other critics, believes that Bernstein's work does not provide convincing explanations for these differences, and he, therefore, calls for alternative explanations based on a distinction between what he refers to as (i) knowledge of language, and (ii) use of language. "What has to be explained", he says, "is why working class (WC) children

do not frequently use linguistic forms which they quite clearly know (and which tend to be valued by teachers).⁽¹⁾ It is Stubbs' belief that modern class speakers are reflecting different preferred modes of discussion and therefore different value systems about what is important to elaborate and make explicit. He therefore suggests that Bernstein is dealing with mere differences of style, and that the differences are never absolute; they merely reflect relative differences in frequency of use and not a sharp contrast between two underlying modes of speech. This open field for investigation has recently been the subject of further discussion by writers such as Shotter and Cook, who attempted to analyse the matter from an affective point of view in which the personality of the child is the centre.

Shotter explains this point which is related to the acquisition of particular linguistic practices and not to others, due in his view to one's particular everyday life linguistic exchanges and personality: "One may learn to joke or commiserate, for instance, but fail to learn to describe or to command others - at least in some contexts. 'Showing' the child how ideas and events are related to one another would not seem to be enough; the child will not learn how to do it himself as a practical skill."⁽²⁾ Furthermore, Cook distinguishes in language acquisition between what he calls "talking to" and "talking at" which reveals an important difference in the effectiveness of the language input provided

(1) M. Stubbs, Language, Schools and Classrooms (Methuen Co. Ltd., 1976) p. 47.

(2) J. Shotter, "The cultural context of communication studies: theoretical and methodological issues", in A. Lock (ed.), Action, Gesture and Symbol: The Emergence of Language. (New York: Academic Press, 1978) p. 73.

to the L₁ learner, from the point of view of whether or not the personality factor is taken into consideration when addressing the child. "Talking to children means a two-sided conversation in which the child's point of view is as good as the adult's. At one moment the adult may be speaking; the next the child may take over the role of speaker. Both of them are continually adapting what they are saying to the other person's reactions. Because of this the speaker usually tries to say something that is relevant and interesting to the listener and changes tack if the listener shows the wrong reaction. Talking at children means a one-sided conversation where the adult dominates and controls everything that goes on. He is only concerned with getting his point of view over, not with the other person's point of view."⁽¹⁾ Cook argues that one of the causes of handicap in children in this respect is often claimed to be that some social backgrounds do not allow the child to use language in a variety of ways. He emphasizes that the children in the first type who are talked to will be more advanced at language than those in the second type. He discusses the issue in terms of the roles that people take up in conversation; "a constant superior-to-inferior kind of language prevents the child from learning to use other kinds".⁽²⁾ Cook gives an example from a playgroup supervisor talking at the children, in which only one kind of language is used, where the child always has to play the subordinate role and the adult orders him about: "Come here, Sylvia. Don't touch, you'll break it. You're baking a cake - very good. I'm going to

(1) V. J. Cook, Young Children and Language (London: Edward Arnold (Publishers) Ltd., 1979) p. 53.

(2) Ibid., p. 55.

put the stick away." "This language", he comments, "is vital to running a playgroup. But if it is the chief kind the child hears it will not extend his language."⁽¹⁾

This affective aspect which is closely connected with the personality of the individual and which reflects itself in his use of language has been discussed in the context of the L₂ learning because of its significant impact on the final outcome of such learning.

In his article, "individual differences in second language learning", Genesee⁽²⁾ asserts that personality factors play an important role in second language learning, i.e. the L₂ adult learner will be more or less successful in a particular setting depending on his own personal style. This puts great emphasis on the influence of attitudinal/motivational features and individual differences in the L₂ learner's cognitive style as reflected in personality variables. Some differences in personality variables do not allow certain positive learning styles to operate productively. It is on such a basis that Dulay and Burt⁽³⁾ have attempted to study the operation of the internal mechanisms in which the personality factor is one important component. Their findings confirm the point that personality factors and first language experience influence the role of successive operation of affective filtering, cognitive organization of input and monitoring in the internal processing of language input. Such findings are significant as a guide to the

(1) V. J. Cook, op. cit., p. 55.

(2) F. Genesee, "Individual differences in second language learning", The Canadian Modern Language Review, Vol. 34, 3, Feb. 1978, p. 502.

(3) H. Dulay and M. Burt, "Some remarks on creativity in language acquisition", in W. C. Ritchie (ed.), Second Language Acquisition Research, (New York: Academic Press, 1978) p. 70.

understanding of the nature of the L₂ adult learner's intake filters and to the modelling of the linguistic input accordingly.

Apart from the phenomenon of the two linguistic codes which are believed to be the by-product of the social interactional process with the individual L₁ learner which reflects itself in the use of his language, there is another phenomenon which can be said to be also the result of the social interactional process with the self. It is what Watton⁽¹⁾ calls the 'phenomenon of deviance' from the speaking rules in discourse. It is connected with the violation of the speaking rules set by the linguistic social setting as a direct result of the neglect of the affective needs of the violator of the rules. To illustrate this phenomenon, the following example which explains the rules for command given by Labov⁽²⁾ can shed some light on the causes that lie behind the violation of the speaking rules, which is not the direct result of misunderstanding or lack of comprehension. Labov argues that if a command is to be heard as a valid command, then, where A is the speaker and B the hearer, B must believe that A believes that:

1. X needs to be done.
2. B has the ability to do X.
3. B has the obligation to do X.
4. A has the right to tell B to do X (because he is older or superior).

Analysis of deviance of this rule must consider the way in which contextual and other affective features affect the

(1) Quoted by A. Wootton, Dilemmas of Discourse: Controversy about the Sociological Interpretation of Language (London: George Allan & Unwin Ltd., 1975) p. 100.

(2) Ibid., p. 53.

violation or underlie it. Violation can easily take place simply because item no. 4 above which shows the social distributions of rights and privileges in terms of the age and social rank only, does not take into consideration the affective rights of the individual himself as a respected human being. An L_1 learner can easily violate this rule of command when his affective rights are not taken into consideration. No effective assimilation of this speaking rule will easily be acquired unless the applicability of condition No. 4 is modified in the following way:

4. A has the right to tell B to do X, when A does not violate B's affective rights of self-respect, regardless of the age of A or B or their social position.

By connecting the rules of speaking with the affective rule of promoting self-respect, a sense of security, etc., many gaps of linguistic miscommunication can be explained. In interpreting how interaction and role-taking can be seen to be working, G. H. Mead's work (1967) stresses the interaction between the 'I' and the 'Me' and the 'Generalized other' in two party exchanges. ⁽¹⁾

(iii) The difficulties involved in both processes:

In trying to draw comparisons between the two types of learners with regard to this area of language learning in both L_1 and L_2 processes, the starting point could be to examine the implication of Brown's following statement, and see how

(1) Quoted by A. Wootton, op. cit., p. 98.

much it still applies when the L_1 learner is put into comparative perspective with that of the adult L_2 learner:

"All of us have been players of the Original Word Game, as children, as students, or as anthropological linguists. The player with the greatest handicap is the child. For the child this process of first language learning is also the process of cognitive socialization. The categories of the parental tutors are, in large measure, the categories of the culture."⁽¹⁾

The difficulty for the L_1 learner stems perhaps from the fact that he starts his journey from a zero point and has therefore to learn not only an incredibly complex system of phonology, syntax, and lexicon, but also a multitude of rules of functional appropriateness. Kennedy gives specific details of the complexity of the task confronting the L_1 learner. "He learns when to speak and when not to; how to speak to his grandmother, his teacher, or the child next door; how to be tactful, direct, evasive, persuasive, inoffensive and defensive. He has to pair linguistic forms with the semantic relations and conceptual categories underlying language use."⁽²⁾

From the above remarks, it appears that language acquisition evolves out of learning how to construct good communicative interactions which entail some role-taking skills for their fulfilment. Sociolinguists recognize two basic kinds of

(1) R. Brown, op. cit., p. 384.

(2) G. Kennedy, op. cit., p. 70.

understanding that are involved in communicative skills:

(i) social understanding, and (ii) understanding of message content. Shatz, for example, views social understanding as "the knowledge of participant relations and responsibilities in social interactions. Basic to such knowledge is an understanding that interaction involves co-operation on the part of both speaker and listener. ... The sorts of co-operative obligations that each participant has are determined in part by one's role in the conversation ..."(1) These principles of co-operative conversations are behavioural procedures which should be adhered to for conducting conversation and for acquiring the role-taking skill required of the conversation-
 alist. There are, in addition, sub-skills which are also required for the acquisition of successful communication, and which make the task of acquisition an uneasy one. Shatz stresses the difficulty involved by observing that "Regardless of what particular set of sub-skills underlies successful performance on a particular communicative task, it is how hard one has to work in exercising each of those sub-skills that is crucial for determining whether overall successful performance will in fact occur."(2)

The task for the adult L₂ learner, having a wider range of communicative skills than the L₁ learner together with specific cognitive and linguistic skills to lean on, should - comparatively speaking - be easier for him; yet, the opposite seems to be the case, especially in a classroom situation.

- (1) M. Shatz, "The relationship between cognitive processes and the development of communication skills", in E. H. Howe, (ed.), Nebraska Symposium on Motivation 1977 (Lincoln, London: University of Nebraska Press, 1977) pp. 2-3.
- (2) Ibid., p. 3.

The purpose of the present section is to find out some of the major reasons for the advantage of the L_1 learner over the adult L_2 learner in the task of the acquisition of communicative competence which entails, among other things, the internalization of the speaking rules of the language concerned.

Section II

Differences in the Cultural Setting of both the L_1 and L_2 Learners:

- (1) The L_1 learner's cultural environment as a whole helps develop his ability to function as a conversational partner in a social setting; the opportunities for L_2 learners in a formal situation are limited:

Snow refers to this fact by pointing out that "adults are continually monitoring the children's degree of attention and understanding, and are adjusting various features of their speech so as to maintain the children's responsiveness at optimal levels".⁽¹⁾ Many of the questions in mothers' speech to young children and the high frequency of interrogatives have been reported to be tutorial and conversational in nature. Changes in the maternal speech result from the development of the child's ability to take his turn in the conversation. This reflects the mother's intention to use a conversational model in interacting with her child. The conversational mode is reciprocal, i.e. information is exchanged between the mother and the child in both directions. Much of the mother's speech is directed towards eliciting responses from the child. The most important and striking aspects of mother-infant interaction

(1) C. E. Snow, "The development of conversation between mothers and babies", Journal of Child Language, Vol. 4, No. 1, Feb. 1977, p. 3.

are perhaps the mother's strategies in repairing the breakdown in the conversational exchange by filling in for the child, taking the turn herself, a technique that Snow has called "a conversational-repair device", which usually consists of phrasing questions so that a minimal response on the child's part could be treated as a reply. Conversational repair procedures involve repetition or taking the child's turn, thus providing good opportunities for reciprocal communication. The mother's willingness to fill in for the child whenever necessary is of great help to him in carrying on a conversation with her despite his yet inadequate strategies to fulfil effectively the task of reciprocal communication. (1)

The picture is entirely different in a classroom situation due primarily to a lack of communicative impulse on the part of the two partners, the teacher and the L₂ learner.

Bloomfield points out that the child acquires the culture along with his speech, regarding it unquestionable, as part of the nature of things. "The child hears and speaks in real situations, with powerful motives, rewards and penalties. Most important of all, the child gets his impressions on a blank slate, while our students have at every point to overcome lifelong habits of muscular action, of naming, classification, and combinatory patterns peculiar to their native language." (2)

It is obvious from such a statement that the L₂ learner's new linguistic/cultural experience cannot register on a blank slate - a condition that leads him to err constantly through the

(1) See: C. E. Snow, op. cit., p. 20.

(2) L. Bloomfield, "About foreign language teaching", The Yale Review, 34, 1945, pp. 625-641 reprinted in A Leonard Bloomfield Anthology, C. C. Hockett (ed.), Bloomington, Indiana Univ. Press, 1970, p. 435.

prepossessions of his L₁ linguistic/cultural one. The difficulty for him stems from the situation that he does not learn the L₂ culture from 'scratch' as he learned that of his L₁. The previous experience, meanings and habits of his L₁ culture influence him at every step causing what is called the phenomenon of 'cultural interference'. Lado believes that the native-culture experience will facilitate learning those patterns that are sufficiently similar to function satisfactorily when transferred. The native culture experience will interfere with those cultural patterns and meanings that are not equatable with similar ones that are partly similar but function differently in the target culture. (1)

(ii) The L₁ learner's process of assimilation of the speaking rules is mostly indirect, i.e. unconscious, slow, and progressive:

The process of acquiring the L₁ 'speaking rules' can be described as mostly unconscious and only partly conscious. Through language as the main channel, the patterns of living are transmitted to the child in a way that helps him to adopt its cultural manifestations. It is the result of total immersion rather than that of teaching, at least in early childhood and before schooling starts. "Nobody teaches the child the principles on which social groups are organized, or their systems of beliefs, nor would he understand if they tried. It happens indirectly, through the accumulated experience of numerous small events, insignificant in themselves, in which his behaviour is guided and controlled, and in the course of

(1) R. Lado, op. cit., p. 30. See also: R. A. Baecher, "Bilingual children and educational cognitive style analysis", in A. Simoes (ed.), The Bilingual Child (New York: Academic Press, 1976) p. 47.

which he contracts and develops personal relationships of all kinds. All this takes place through the medium of language." (1) The process is partly conscious however because the child learns some of these rules explicitly when his parents tell him, for example, to say 'please' when he asks for something or not to interrupt when adults are speaking. The L₁ linguistic system enables the young child to learn through it how to interpret the meaning not only as specifically relevant to the context of situation, but also as being generally relevant to the context of the culture. Some examples about this kind of unconscious learning are provided by Halliday. He says: "... when Nigel's mother said to him 'Leave that stick outside; stop teasing the cat; and go and wash your hands. It's time for tea', he could not only understand the instructions but could also derive from them information about the social system: about the boundaries dividing social space, and "what goes where"; about the continuity between the human and the animal world; about the regularity of cultural events; and more besides." (2)

To show how this unconscious process is slow, progressive and accumulative, Halliday concludes, "He does not, of course, learn all this from single instances, but from the countless sociosemiotic events of this kind that make up the life of social man. As a corollary to this, he comes to rely heavily on the social system for the decoding of the meanings that are embodied in such day-to-day encounters." (3) Drawing a comparison between the acquisition of L₁ communicative competence

(1)(2) M. A. K. Halliday, op. cit., p. 9.

(3) Ibid., p. 124.

and further learning of the speaking rules of another language by children from this point of view of the unconsciousness of the process vs. the consciousness of it, Stork and Widdowson find that this difference is a major one, one that can be regarded as primary and outstanding:

"In teaching her young child his native language the mother is also teaching a way of looking at the world and a way of categorizing the experiences the child enjoys of it. This probably constitutes the major difference between the acquisition of the native language and any subsequent learning of a foreign language the child may undertake. It is not that the parent consciously teaches the child and it would be more accurate to say that the child learns from the parent rather than that the parent actively teaches. At all events, there is a process of give and take, a linguistic cut and thrust."⁽¹⁾

The comparatively slow process of L₁ learning is emphasized by Bloomfield as a facilitating factor both in terms of the quality and quantity of such opportunities open to him: "The child takes several years to master his native language, and during this time he hears and speaks as much in a month as our students would in a year. The child hears and speaks in real

(1) F. C. Stork and J. D. A. Widdowson, Learning about Linguistics: An Introductory Workbook (London: Hutchinson Ltd., 1974) p. 144.

situations, with powerful motives, rewards and penalties." (1)

This rather unconscious acquisition process is an asset for the acquisition of his first language in the sense that it facilitates for him the acquisition of the "speaking rules" of his own language. The advantage a child has over the adult in this learning task is associated with the fact that during the period of primary socialization, for which the family is usually the principal agent, the child internalizes the "speaking rules" of his language not as some of the many possible rules but as the rules, the only existent and only conceivable ones. These "speaking rules" represent for him a relatively coherent and consistent system of concepts. In other words, by assuming such a consistent nature, they provide him with a personal sense of security. Contact with another language at this stage may be felt as destructive:

"The appearance of an alternative symbolic universe poses a threat because its very existence demonstrates empirically that one's own universe is less than inevitable." (2)

The "threat" comes as a result of a change in the system of communication the individual has been at ease with. "This change implies a new set of social rules for the "I", a new and different type of conversation between the "I" and the "Me" and a new self-concept for the person." (3)

- (1) L. Bloomfield, op. cit., p. 435.
 (2) Berger and Luckman, p. 108. Quoted by C. C. Christian, "Social and psychological implications of bilingual literacy", in A. Simoes (ed.), The Bilingual Child (New York: Academic Press, 1976) p. 21.
 (3) C. C. Christian, ibid., p. 21.

When the self concept of the child is being formed, the "speaking rules" of his language may be expected to have a stronger and longer-lasting impact than at any other part of the life-cycle. He naturally tends to regard them not as culture-specific but as part of human nature. This in itself is an advantage for the child because it facilitates his unconscious acquisition of them. He questions them only when he encounters another culture and a way of speaking which might be radically different from his own.

The interaction between the psychological and sociological functions of language and the effect of that on cognition is obvious here. It emphasizes the role of language in the social processes by means of which the child comes to conceive his own existence in terms of the existence of others. Cooley spoke of the looking-glass self in referring to the manner in which the child comes to view himself through the eyes of others; Mead used the terms I and me to differentiate between the individual and social concept of the self. In each case, language is considered one of the most important mediating factors in the development of the self-concept. And in each it is assumed that significant variation would result from exposure of the child regularly to more than one language.⁽¹⁾

Thus it can be concluded that the psychological and sociological functions of language interact in such a way as to lead some anthropologists to believe that they are rather inseparable:

"Language not only serves for the purposes of communication but also to indicate a person's reference group; his language

(1) See: C. C. Christian, op. cit., p. 20.

is inexorably tied to his image of himself." It is for this reason that it is believed that the native language is of such transcendent significance in the creation of the child's identity during the primary as well as the secondary socialization process. (1)

The process of acquiring his L_1 speaking rules and the impact of their acquisition on the child's personal identity is a comparatively slow and long process which may begin with birth or even before birth. In his book, Child Psychology, Jersild refers to this specific point stating that "As soon as a child is born the stage is set for him to begin his career as a learner. How early does this process of learning begin? It is probably from the time of birth, if not before." (2)

(iii) The sources of the input linguistic/cultural data for the L_1 learner from which he learns about the culture and the speaking rules are richer in scope than those of the L_2 learner:

It is first and foremost through the use of language in the course of everyday interaction in the key socializing agencies of family, peer group, and school, that culture is transmitted to the L_1 learner. These are rich sources from which he can derive the speaking rules needed for the acquisition of communicative competence. Halliday refers to this advantage of the child which represents a great asset to him in his learning task by stating that "The striking fact is that it is the most

- (1) N. Modiano, "Bilingual Education for Children of Linguistic Minorities", in S. K. Ghosh (ed.) Man, Language and Society (The Hague: Mouton, 1972) p. 187.
- (2) A. T. Jersild, Child Psychology (London: Staples Press Ltd., 1955) p. 73. See also: W. S. Condon and L. W. Sander, "Neonate movement is synchronized with adult speech: International participation and language acquisition", Science, 183, 1974, pp. 99-101.

ordinary everyday uses of language with parents, brothers and sisters, neighbourhood children, in the home, in the street and the park, in the shops and the trains and buses, that serve to transmit, to the child, the essential qualities of society and the nature of social being."⁽¹⁾ When the L₁ learner goes to school his opportunity to accelerate his language development increases by being in contact with other children who significantly contribute to influence his knowledge about the physical world and the associated linguistic referents and events. Stork and Widdowson point out that "the young schoolchild learns the kind of language he uses in his street and playground games mainly from other children, not from adults".⁽²⁾ Thus peer groups have a profound influence on the L₁ learner's developing approach to, and engagement in the world which reflects itself in his use of his language. We can refer to two general sources here from which the L₁ learner gets help to develop his newly found learning and newly developed strategies for dealing with his linguistic world. One is the significant adults as teachers or other similar individuals, and the second major influence is the peer groups. The balance between the relative influence of one or the other of these classes of individuals will vary with the age of the child and the culture. Examining the nature of the adult-child and child-child discourse will unfold major differences in the field of the acquisition of L₁. There are, for example, differences in conversational functions, practice possibilities, and the kinds of structures the child

(1) M. A. K. Halliday, op. cit., p. 9.

(2) F. C. Stork and J. D. A. Widdowson, op. cit., p. 143.

has the possibility of learning from each. From the adult - as has been illustrated in the previous chapter - he gets notions of how to answer routines based on objects present in the immediate environment and ongoing actions; he gets vocabulary that is visually represented; he gets the rules of conversation. In child-child discourse data, the picture is different. The L_1 learner gets out of such interaction, among other things, an immense amount of practice. He thus depends on the strategy of repetition, which is much more extensive than is the case with the adult-child conversational discourse. In addition, child interactions range over a much wider sphere - threat, justification, blaming, planning etc. In forming the abstract network of his L_1 , the input from both sources with which the L_1 learner has to work in is of great significance. Such input data serve several conversation functions.

(iv) The L_1 learner is functionally motivated; his lack of choice of his L_1 creates a "sense of inevitability" which is a help rather than a hindrance to his acquisition of his L_1 .

A functional approach to language can throw light on the question of what functions language serves in the life of an L_1 learner. Basically, it serves to fulfil for him certain social needs, and he is, therefore, believed to be functionally motivated to acquire his L_1 . To quote Halliday:

"We can reasonably assume that the child is functionally motivated; if language is for the child a means of attaining social

ends - that is, ends which are important to him as a social being - we need look no further than this for the reasons why he learns it." (1)

Being functionally motivated is a sociological advantage for the L₁ learner over the adult L₂ learner. Furthermore, the lack of choice of the L₁ he is expected to acquire represents an additional sociological advantage for the L₁ learner. Referring to this advantage, Berger and Luckman explain its psychological significance in facilitating acquisition: "This lack of choice will create in the child 'a sense of inevitability' and however much the original sense of inevitability may be weakened in subsequent disenchantments, the recollection of a never to be repeated certainty - the certainty of the first dawn of reality - still adheres to the first world of childhood." (2) Macnamara explains that the language acquisition device (LAD) in L₁ learners is essentially geared to human thought and to its communication, and that in the case of the L₂ learner, it does not function at all unless the learner is vitally engaged in the act of communication. He therefore stresses the idea that "we should look for the really important part of motivation on the act of communication itself, in the student's efforts to understand what his interlocutor is saying and in his efforts to make his meaning clear". (3) In his article, "Culture and language as factors in learning and education", Lambert asked the

(1) M. A. K. Halliday, op. cit., p. 18.

(2) P. L. Berger and T. Luckman, The Social Construction of Reality: A Treatise in the Sociology of Knowledge, (Garden City, N.Y.: Doubleday, 1967) p. 135.

(3) J. Macnamara, "The cognitive strategies of language learning in J. W. Oller and J. C. Richards, Focus on the Learner, 1975, p. 64.

following related question: "Do people's beliefs about culture and language affect the learning process? More specifically, do beliefs about a particular ethnolinguistic group influence learners in their attempts to master that group's language?"⁽¹⁾ By his question, he suggests the need to test whether beliefs are really important for the L₂ learning process, whether they affect their efficiency in their attempt to learn their L₂, and whether L₂ learners might become victims of belief systems. Hertzler's (1965) description of some of the problems associated with the use of two languages can give an appropriate answer to Lambert's question. One problem, he says, is that the person "lives with two different sets of cultural perspectives. He must therefore be socioculturally and psychologically oriented in two different worlds", as a result he is a "divided man".⁽²⁾

- (1) W. E. Lambert, "Culture and Language as factors in learning and education", in F. R. Eckman (ed.) Current Themes in Linguistics, 1977, p. 21.
- (2) J. Hertzler, A Sociology of Language (New York: Random House, 1965) p. 429.

CHAPTER FIVE

The Role of Pedagogy in
Second Language Learning
and Teaching

CHAPTER FIVEThe Role of Pedagogy in Second Language
Learning and TeachingIntroduction

Formalized second-language teaching has always faced baffling problems for which it has not really succeeded in finding effective solutions. The main reason is perhaps the inability of coping effectively with the complicated problem of learning, i.e. how to find the necessary relations which must obtain among internal and external variables in order for a change in capability to take place. The present study has made it clear that the internal capabilities in themselves cannot generate learning without the stimulation provided by external events, nor can external variables exert their effects without the presence in the L_2 learner of certain cognitive and affective capabilities. The basic difficulty faced by teachers, therefore, is related to the question of how to arrange the external conditions of learning in ways which will optimally interact with the internal capabilities of the L_2 learners and the variations of these capabilities, so as to bring about the changes desired. Finding effective theoretical implications that can be put into practical use to help solve the problem is a highly complex task which is made more difficult still by the fact that "For centuries educationists have dabbled with methods with only a superficial knowledge of what enables man to acquire language in the first place and knowing next to nothing about how a second language can be assimilated

eight, eleven or even sixteen years after the brain receives its first mother-tongue messages".⁽¹⁾ Taylor's statement gives some hope, however, for he points out that "... if we can achieve some degree of understanding of how a learner actually learns we should be able to utilize our findings in classroom teaching and material preparation".⁽²⁾ Corder emphasizes the role pedagogy plays in the field of L₂ learning which helps the L₂ learner to proceed more effectively towards the desired second language norm. By using the term "teacher talk" and not "teacher's language", Corder makes it clear that the process of the interaction with the learner on the part of the teacher should be based on what he calls "rhetoric", i.e. the art of using language effectively as a means of communication - a statement which clearly indicates the role of pedagogy in the field of L₂ learning.⁽³⁾

Second language pedagogy is looked upon as an applied science which is closely interrelated with many disciplines.⁽⁴⁾ For this reason, the present chapter, in order to throw more light on the role of pedagogy in second language learning, hopes to utilize the findings of current research in the field of linguistics, psycholinguistics and sociolinguistics, and to draw assumptions from all relevant disciplines. The conclusions of the current research in the above-mentioned fields

- (1) R. C. Powell, "Sex differences and language learning: A review of the evidence", Audio-Visual Language Journal Vol. 17, 1, 1979, p. 24.
- (2) B. P. Taylor, "Adult Language Learning strategies and their pedagogical implications", TESOL Quarterly, Vol. 9, No. 4, Dec. 1975, p. 395.
- (3) S. P. Corder, "Learner language and teacher talk", Audio-Visual Language Journal, Vol. 16, No. 1, 1978, p. 5.
- (4) See: W. Zydatis, "A kiss of life for the notion of error", IRAL, Vol. XII, 3, Aug. 1974, p. 231.

will have a considerable effect on our understanding of the role of pedagogy in second-language learning. The complexity of such a task is a stumbling block for establishing any coherent model of a theory of language pedagogy. This is expressed in Corder's major address at the third International Congress of Applied Linguistics in Copenhagen (1972).⁽¹⁾

The search for a theory of second language pedagogy is a search for a way to bring all these studies together and to balance their contributions. Linguistics and its related fields, especially psycholinguistics and sociolinguistics help lay down the basis for a theory of language pedagogy, which does not itself indicate a method, but rather provides implications for the development of a method for a particular teaching task.⁽²⁾ Strevens presents a framework of reference which he calls 'methodics'. It combines pedagogical processes and linguistic categories into a sort of "check list". Methodics, he explains, is based on the idea that every single course, textbook, or exercise must answer three fundamental questions: (i) What teaching items are to be included? (ii) In which order should they be taught? and (iii) What teaching techniques are most appropriate to each item?⁽³⁾ Before we can say much with certainty about these questions, we have to reformulate these questions in neuroaffective terms in such a way that they encompass the individual differences among the L₂ learners.

(1) S. P. Corder, "Problems and solutions in Applied Linguistics" Proceedings of the Third Congress of the Associated Internationale de Linguistique Appliquée (Copenhagen, 1972) Vol. 3, Heidelberg: J. G. Verlag.

(2) B. Spolsky, "Linguistics and language pedagogy: Applications or implications?" in M. Lester (ed.), Readings in Applied Transformational Grammar (New York: Holt, Rinehart & Winston Inc., 1973) pp. 269-270.

(3) S. P. Strevens, "Linguistics and research in modern language teaching", in H. Jalling (ed.), Modern Language Teaching (London: Oxford Univ. Press, 1968) p. 31.

The modification needed in this respect is to put the above-mentioned questions in the following new formulae:

- (i) What teaching items are to be included to what type of learner?
- (ii) In which order should they be taught to the different types of these L_2 learners? and
- (iii) What teaching techniques are most appropriate to each item and to each type of learner?

This is simply because within the framework of psycholinguistics there is no such thing as 'difficulty' in the absolute. It is the learner's behaviour which determines the basis of what is difficult or easy: "It is chiefly the learner's past and present learning experience that makes any learning material easy or difficult."⁽¹⁾ The term 'difficulty' of a learning material may thus be described from this point of view in terms of time or number of trials needed to learn it by one person or a given group of persons. Psychology defines the term as follows: When person (A) takes more time to learn item (X) than item (Y), we may say that item (X) is more difficult for person (A) than item (Y). However, if person (B) takes more time to learn item (Y) than item (X), then (Y) is more difficult than (X) for person (B).⁽²⁾ Thus in language learning the complexity seems to be more psychological than logical.

Sigel and Cocking refer to the fact that individuals differ in rate of growth and quality and quantity of experience.

- (1) M. Higa, "The psycholinguistic concept of 'difficulty' and the teaching of foreign language vocabulary", in Language Learning, Vol. XV, No. 3 and 4, 1965, p. 168.
- (2) Ibid., p. 168.

These background factors are assumed to influence the way people develop concepts. They thus argue that "concept development is related to the individual's style, to the individual's selection of particular cues by which to organize matters. This concept of cognitive style is of particular significance in our conceptualization of individual differences in development."⁽¹⁾ The writers believe that the variation in the selection of particular aspects of the salient cues to be extracted from stimuli is due to the particular style the person develops. Approaches to one's surroundings have been called cognitive style, since it is believed that the particular aspect of items that becomes salient for the person depends on individual differences and previous experiences with such stimuli.

An evaluation of difficulty that is pedagogically fair requires more than contrastive analysis (CA) and error analysis (ER). Priority has to be given to what a linguistic learner's problem is. This is because "theory might well prove one day that learners' difficulties have as little to do with linguistic difficulties as general logic has to do with linguistic logic in the reality of a given language".⁽²⁾ This leads to examining the implication of the term (SPD), or the student's perception of difficulties, which states that the linguistic difficulties of the L₂ learner can be made more understood from his own point of view.

- (1) I. E. Sigel and R. R. Cocking, Cognitive development from childhood to adolescence: A Constructive Perspective, 1977, p. 232.
- (2) G. Nickel, "Variables in a hierarchy of difficulty", Paper read in the Pacific Conference on Contrastive Linguistics and Language Universals. Honolulu, 11-16th January, 1971, p. 188.

This implication stems from the psychological principle that all new experiences for the L_2 learner are symbolized or organized into some relationship to the 'self', or are ignored, denied organization, or given a distorted meaning because there is no perceived relationship, or because the experience seems inconsistent with the structure of the self.

The information derived from (SPD), the student's perception of difficulties, can be most helpful in the detection and interpretation of the adult L_2 learner's underlying sources of errors, and in the assessment of the magnitude of the learning problems he encounters, not only from a purely linguistic point of view, but from the learner's point of view as well. Since the L_2 learner does have an insight into his own learning difficulties and is capable of judging the relative degree of difficulty of the second language material with a certain degree of accuracy, taking into account this psychological/affective aspect of the problem, namely what takes place in the learner himself and specifically his perception of difficulty, would provide a more satisfactory solution to the problem of error detection and correction. This means that there is a need to penetrate below the surface phenomenon into the 'psychology of error'. Chau attempts to classify the interfering factors that affect learning either in a negative or a positive way as analysed by samples of explanations he could obtain from some L_2 learners. The explanations reveal a number of factors which are usually called "extralingual factors" which have nothing to do with either the L_1 or the L_2 , since they

include pedagogical factors: order of introduction of structure, type of learner, effect of recency, degree of teacher's emphasis and careful explanation or lack of emphasis in class, etc. (1)

The control of input should primarily be based on an affective point of view, i.e. taking the learner's needs into consideration. Support for adopting such an approach comes not only from the findings of the present study as a whole, but also from the emphasis given to this point by a number of researchers. Corder, for example, heavily stresses this particular and fundamental point of taking into account the learner's needs in planning syllabuses:

"The simple fact of presenting a certain linguistic form to a learner in the classroom does not necessarily qualify it for the status of input, for the reason that input is 'what goes in' not what is available for going in, and we may reasonably suppose that it is the learner who controls this input, and more properly his intake. This may well be determined by the characteristics of his language acquisition mechanism and not by those of the syllabus." (2)

To assume a positive role, the L₂ teacher's input filters should be in harmony with those of the L₂ learners' intake

- (1) See: Tran Thi-Chau, "Error analysis, contrastive analysis, and students' perception: A study of difficulty in second-language learning", IRAL, Vol. XIII, 2, May 1975, pp.117-143
- (2) S. P. Corder, "The significance of learners' errors", in J. C. Richards (ed.) Error Analysis: Perspectives on Second Language Acquisition (London: Longman, 1975) p. 23.

filters. In the interaction process between the teacher and the learner, the L₂ learner himself is the centre who determines what the nature of the data is which actually gets in for assimilation. On the basis of an understanding of the basic needs and developments of the L₂ learner from an overall point of view (physical, psychological and cognitive), the teacher can formulate the nature of his linguistic interaction with his L₂ learners.

Rubin believes that the problem of L₂ teaching lies in the fact that the L₂ teacher seems to start his teaching lessons with little awareness of what is going on in each L₂ learner, and often without directing the attention of the poorer L₂ learners to how the successful L₂ learner arrived at his correct response. In their pre-occupation with the best methods, L₂ teachers fail to attend to the learning process. "If they attended to it more, they might be able to tailor their input to the students' needs and might be able to provide the student with the techniques that would enable him to learn on his own. ... the teacher must find the means to help the student help himself when the teacher is not around."⁽¹⁾ The greater block to the realization of such a goal, in his view, is that the task of observing these strategies is a complicated one because they necessarily involve cognitive processes which neither the learner nor the teacher may be able to specify.⁽²⁾

Some of the answers to the questionnaire prepared as part of the present study highlight the centrality of the affective factor as an interactive mediator between the cognitive aspect

(1) J. Rubin, "What the good language learner can teach us", TESOL Quarterly, 9, 1, March 1975, p. 44.

(2) Ibid., p. 45.

of learning and the environmental. A large proportion of the answers to the question: "What was your reaction when you made mistakes that made native speakers laugh? Were you inhibited, or did you let it pass unnoticed, or what?" offers some illustration and evidence of the fact that those who were predominantly communicatively-oriented did not allow themselves to be inhibited by the influence of the environmental factor (native speakers' laughter), while the other types of learner did in fact impede the development of the natural process of learning the L_2 , and as a result did not learn the second language effectively. One of the answers came from a Pakistani student who said that she was able to acquire the Nepali language as a second language in a rather short period of time while her husband, who went through the same 'immersion' L_2 experience did not, owing primarily to the fact that he was inhibited under the influence of two factors: (i) the environmental; the native speakers' reaction to his mistakes and (ii) his cognitive style which resisted further learning as a result of the inhibition caused by the native speakers' laughter at his mistakes. Furthermore, some L_2 learners pointed out that they liked the L_2 rules to be clearly stated while others did not attach any obvious importance to this factor. In some overlapping cases, the answers showed reliance on both strategies. It is from this point of view that Hatch divided some L_2 learners into the following two types: "rule formers", and "data-gatherers". In analogy with what takes place in research, the writer states that some people begin

organizing and sorting out their data almost before they start collecting, while others gather and gather and the organization and sorting out seems to be minimal as they go along. Yet both types of learner seem to function well. Sorting, even for data gatherers, seems to go on but not in a way that is always obvious to us. (1)

Hatch emphasizes the point that "we need much to look at that indefinable term 'personality' to try to find some way of talking about some of the extreme variations in speed of second language acquisition and the variations in strategies like those of ... our 'data gatherers' as compared with the 'rule formers'. This may be an impossible task but one that, nevertheless, must somehow begin if we hope to say very much about universals in second language acquisition." (2)

By introducing the affective domain into the innate operating principles or processing strategies employed by the L₂ adult learner, the complicated interactions that occur between motivational processes and cognitive functioning may be exemplified. To bring this aspect of learning into focus, the 'four-factor' theory leaves room for individual differences on the basis of the affective factor that has to do with the individual's emotions and instincts such as, for example, the often contrasting needs of the individual for familiarity versus novelty, satisfaction versus challenge and curiosity, socialization versus solitude. Despite their significance, these psychological factors have often been overlooked in

(1) E. Hatch, "Second language learning - Universals?", Working Papers in Bilingualism 3 (1974) p. 8.

(2) Ibid., pp. 15-16.

theories of language acquisition and language learning. Recently, however, researchers have started to draw attention to their relevance. Nelson et al., for example, argue that "in L₁ acquisition, for example, after the early word learning period the child may begin to form concepts solely on the basis of learning novel words. That is, at some point he realizes not only that words can refer to concepts but that a new word for which a concept is not already available can direct the formation of a new concept."⁽¹⁾ Also operative and influential are such related factors and psychological mechanisms as the novelty of stimulation, the opportunity and desire to express one's curiosity, the need to master moderately confusing tasks or ideas, the chance to control the other person's conversation, and the strength of the interpersonal relationship that is the nexus of linguistic realization. In the context of these individual differences, momentary or permanent, conscious or unconscious, which interact with the linguistic process and within which they may come to realization - individual differences can in part be interpreted.

In the context of the 'four-factor' theory, pedagogy has to view second language learning as a highly personal activity; each learner brings a unique set of attributes and skills to the task of learning. Personality, social behaviour, interactional skills, first language control, communicative needs, general intelligence and attitudes are all likely to affect the manner in which learners approach the learning of a second

(1) K. Nelson, L. Rescorls and J. Cruendel, "Early lexicons: What do they mean?" in Child Development, Vol. 49, No. 4 Dec. 1978, p. 962.

language. Pedagogy has, therefore, to take account of the fact that there are L_2 learners who can be called predominantly communicatively-oriented; others can be classified as affectively-oriented; and still others can be regarded as cognitively-oriented learners of L_2 .

The constant interaction between the innate, affective, and cognitive operating principles on the one hand, and the environmental factors on the other can help provide some preliminary guidelines to what seems to be relatively easy to acquire for certain individuals but hard for others. Apart from that, they could also give, generally speaking, a significant clue to the language complexity factor. In this respect, Rodgon et al's findings⁽¹⁾ are most interesting. In their rich data, they account for individual differences based on environmental as well as biological factors. They show, for example, why a single-word speaker was more advanced or more retarded than another owing to the presence or lack of the tendency to talk about action as the complexity of speech increases. In one case of their study, that of a girl named Sherry, they found that the less frequent use of action relations in her single-word speech reflected both an individual tendency to talk less about action, and the replacement of this action by more advanced syntactic means. Such data partly account for individual differences in the rate of linguistic development in first language acquisition. In addition to heredity, environmental factors play a significant role in the formation of these individual differences. Newport explains the environmental

(1) M. M. Rodgon et al., "A multi-functional approach to single-word usage", in Journal of Child Language, Vol. 4, No. 1, Feb. 1977, p. 37.

influence on the acquisition of syntax from the point of view of complicating or facilitating its acquisition, according to the different processes used by different mothers and their differing interactional impacts on different children. "If (the mother) modulates the syntactic complexity of her utterances with some precision, she will thereby produce a linguistic environment which may be simple for the acquisition of syntax by the child. If, on the other hand, she modulates instead the kinds of messages conveyed by those utterances (for example, always tell the child what to do) rather than their syntactic complexity, the result may then be rather different: the linguistic environment of the child may be simple for message-derivation but not necessarily for the direct acquisition of syntax. Finally, if she modulates many of her utterances, each with different priorities, the resulting environment may be strikingly simple at one of these levels for the child."⁽¹⁾

Such data point the way to how a child can be communicatively-oriented, affectively-oriented or syntactically-oriented, a point which the four-factor theory is sensitive to in its pedagogical implications. Chau, for example, touches on this aspect of the learning difficulties involved and how such difficulties differ from one L₂ learner to another. "Some learners, he says, may have considerable difficulty in the syntagmatic dimensions but no problem in handling linguistic materials in the paradigmatic dimensions. He suggests therefore that the student perception of difficulty (SPD) method

(1) E. L. Newport, "Motherese: The speech of mothers to young children", in N. J. Castellan et al., (eds.) Cognitive Theory, Vol. 2, (New York: John Wiley & Sons, 1977) pp. 181-182.

provides a better device for determining problem areas.⁽¹⁾

In addition, Snow and HÖhle⁽²⁾ emphasize the same point in their article about individual differences in second-language ability which they tackled from the points of view of two different components of second-language ability: control of grammatical skills and control of phonological skills.

Their results suggest that there are these two separate components of second-language ability which become obvious only after speakers have achieved a fairly good control of their second language. They confirm that their conclusion accords with experience that some foreigners who speak their second language very correctly have a striking accent and, alternatively, those who continue to make serious syntactic and morphological errors may sound very much like native speakers in simple conversation. Moreover, they believe that there are individual differences in grammatical and phonological ability as well, of course, as in vocabulary, fluency, and facility among both native speakers as well as among second language speakers. Highlighting the importance of the issue at hand, the writers point out that "Such a finding would help to make explicit the ways in which first and second language acquisition are similar to one another, and would contribute to an understanding of the recent findings that similar errors are made by first and second language learners".⁽³⁾

Research in the field of L₁ provides us with the findings

- (1) Tran Thi-Chau, op. cit., p. 137.
- (2) C. E. Snow and M. H. HÖhle, "Individual differences in second language ability: A factor-analytic study", Language and Speech, Vol. 22, Part 2, 1979, p. 160.
- (3) Ibid., p. 161.

that there are individual differences in the use of three functional styles of language: the communicative, the cognitive, and the structural. According to Rodgon et al., the environment has a role to play in the L₁ learner's linguistic orientation:

"A communicatively-oriented child might focus on the give-and-take of the dyadic conversation. A cognitively-oriented child might build a large vocabulary which enabled him to represent symbolically the cognitive structure which he has developed on the sensory-motor level. A structurally-oriented child might express a great variety of syntactic and semantic relations." (1)

Furthermore, Miller has made an observation in this regard about individual differences in L₁ grammatical development. While he finds that the early grammatical rules for some are limited and quite regular, and for other children are more variable, he believes that there is a correlation between this and the innate cognitive and affective differences. "Some children are quite willing to speak at almost any time, whether or not they have the appropriate grammatical structures at hand to express their thoughts ... Others are more reserved in this regard, and will avoid talking at all, or will use a clumsy circumlocution. I am inclined to think

(1) M. M. Rodgon et al., op. cit., p. 24.

that the variations that are closely tied to formal features of language reflect innate individual differences." (1)

Fillmore stresses the point that social strategies and skills are needed in second language learning because the learner must play an active role in inviting social interactions with speakers of the L₂, and also in maintaining the interaction once started. She argues that to a large extent, social skills are related to self-confidence, personality, temperament, personal preference: "The child who is outgoing, confident of his own worth, friendly and desirous of being with other children, is much more likely to find ways of establishing relationship with others, despite any language barrier, than the child who is shy, insecure or a loner at heart." (2) Those who have inadequate social skills or social strategies for relating with others in general will be handicapped in their abilities to acquire communicative competence not only in the learning of L₂ but also in the communicative use of their L₁. It is thus clear that the social aspects of the language learning process are found in this study to be intricately involved with the affective and cognitive aspects. The success or failure of the learner's efforts are seen to depend in good part on his ability to establish and maintain social contact with the people who can give him the input and the contexts he needs for learning the L₂. Individual differences in language learning reflect not only cognitive differences, but more importantly, social and affective

- (1) W. R. Miller and S. M. Ervin, "The development of grammar in child language", in U. Bellugi and R. Brown (eds.), The Acquisition of Language Mongor Soc. Res. Child Development 1964, 29(1), pp. 9-33.
- (2) Lily W. Fillmore, The Second Time Around: Cognitive and Social Strategies in Second Language Acquisition. Ph.D. Thesis (Stanford University, 1976) p. 121.

differences which reflect themselves in the type of personality the learner has, his interest, motivation and tendencies to engage in language activities and his ability to use social opportunities for learning and using his L₂.

In his article "Variation in child language", Wells (1) admits that there is as yet no overall theory of variation. To point the way towards the formation of such a theory, however, he attempts to identify styles of development of linguistic behaviour over time in particular L₁ learners, dividing the factors involved into four main groups, as shown in his following figure:

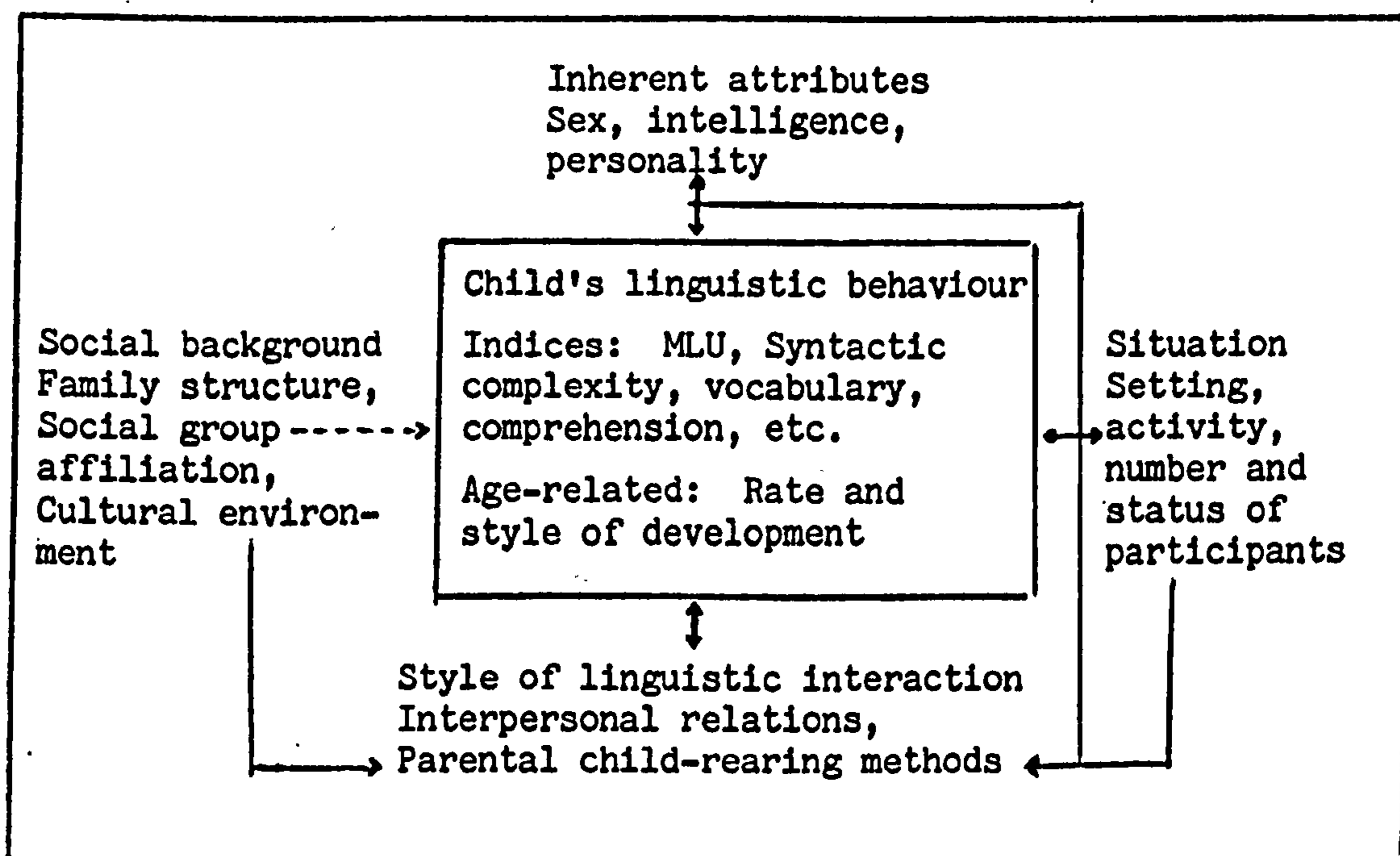
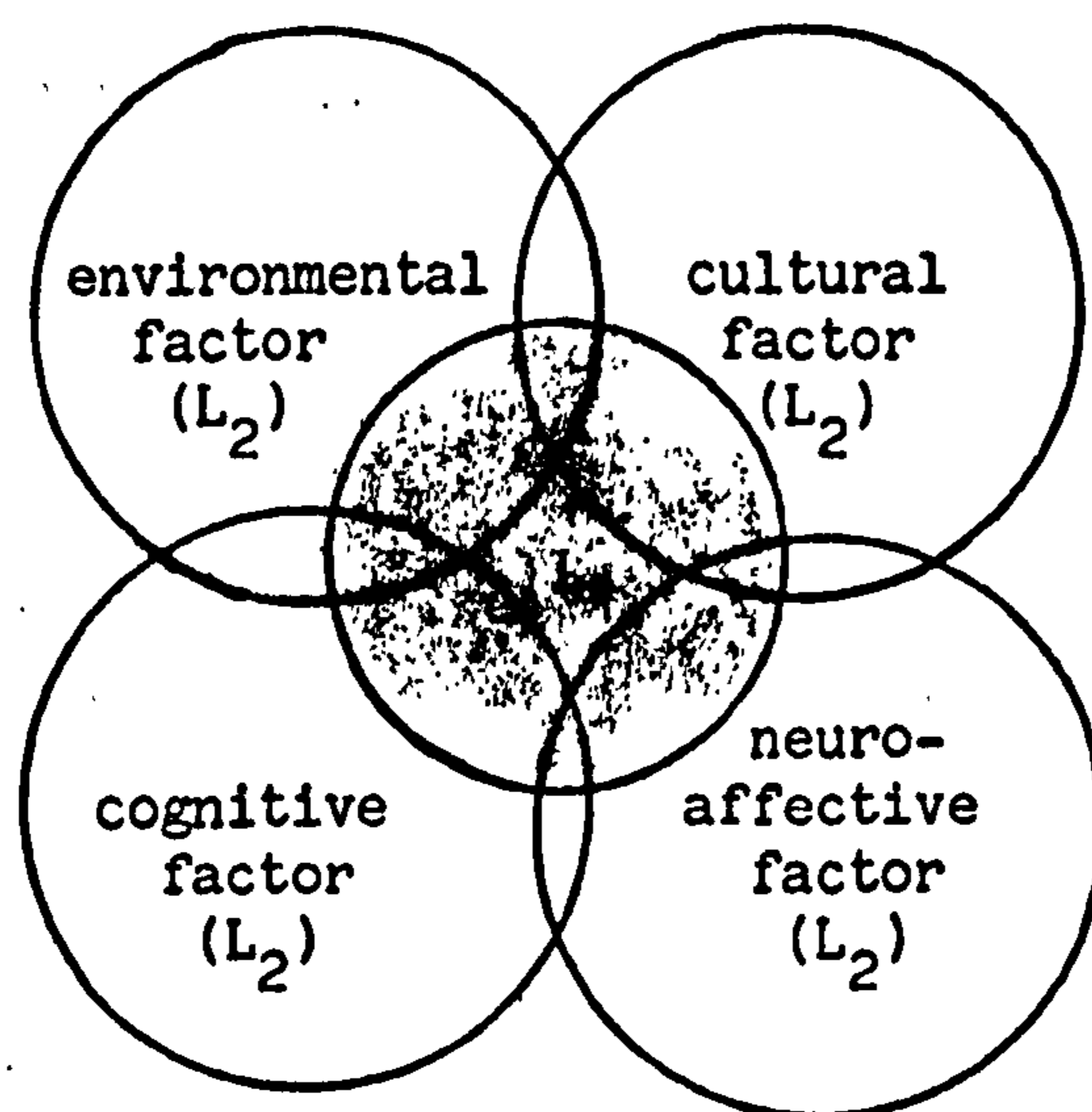


Figure No. 4 Types of Variation

Notice how the four main groups correspond with the factors involved in the proposed theory of the present study, which takes into consideration this total process involved.

(1) G. Wells, "Variation in child language", in P. Fletcher and M. Garman, (eds.) Language Acquisition: Studies in First Language Development, (New York: Cambridge Univ. Press, 1979) p. 379.

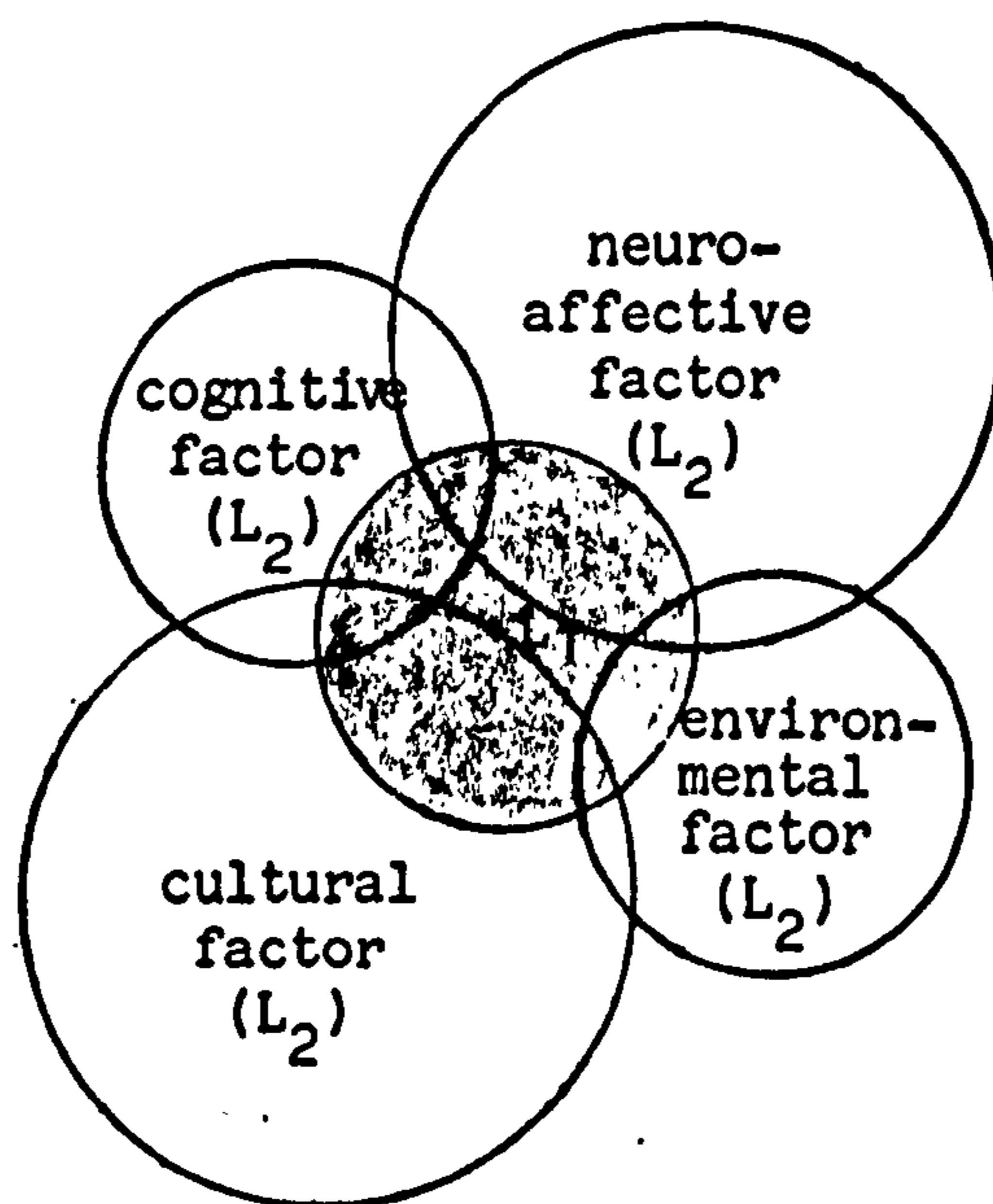
Sinclair concluded his article on the "Transition from sensory-motor behaviour to symbolic activity", by stating that "Today, many papers on language acquisition seem to end with a question mark" and that his paper was no exception.⁽¹⁾ The same is true of this study which hopes that the four factors specified here may at least point the way to solve the mystery involved. Thus, the open question in this research for pedagogy to decide upon or to tackle is how much the contribution of each of the four factors mentioned should be in order to cater for the individual differences encountered in a classroom setting. Does the standard diagram below, in which the four factors equally overlap, from the point of view of their importance and contribution, suit all individual learners in the same equally proportionate way?



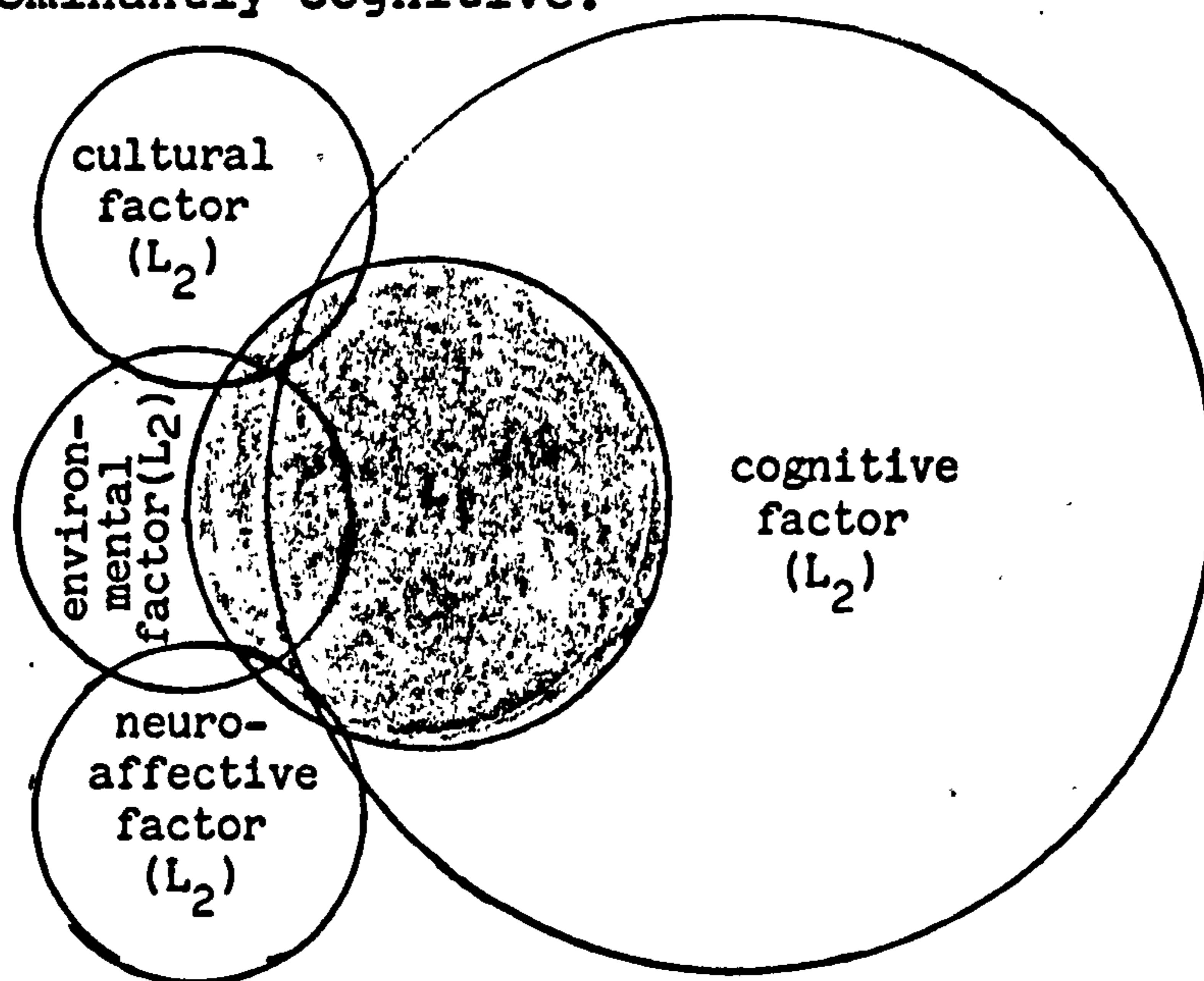
Because the issue constitutes a basic educational concern, the four-factor theory has found a place for it, which manifests itself in the flexibility of the theory to cater for the individual differences, which are the outcome of both biological and environmental influences. On such a basis, the above standard

(1) H. Sinclair, "The transition from sensory-motor behaviour to symbolic activity", in L. Bloom, Readings in Language Development, 1978, p. 160.

diagram would rather take the following shape for those learners who are, say, more neuro-affectively and culturally-oriented in their process of learning than cognitively or environmentally:



Moreover, the teacher may contemplate the figure to be as the following for those types of L₂ learners whom he believes would prefer to learn language by adopting an approach which is for example, predominantly cognitive:



This is what is meant by Corder's concept of the 'art of teaching'. It involves understanding the nature of language, the nature of the individual differences of the L₂ learners, and the nature of the setting in which learning is taking

place. In the light of such an understanding, teaching can be made more effective, in the sense that the L₂ teacher becomes aware of the process of language learning and its impact on different L₂ learners.

In an attempt to point out some significant implications which appear to be directly applicable to the methodology of teaching a second language, the present chapter brings into focus the following important points:

- (i) Pedagogy and the communicatively-oriented L₂ learners;
- (ii) Pedagogy and the cognitively-oriented L₂ learners;
- (iii) Pedagogy and the affectively-oriented L₂ learners.

This approach, or avenue of investigation seems to support the findings of the present study as a whole, and is therefore in accord with the 'four-factor' theory which postulates the manifold links between those fields involved in the learning of both L₁ and L₂: cognition, neuro-affect, environment and culture. The originality of the 'four-factor' theory lies not so much in the novelty of the suggestions made, for not all of them are new, but in reconciling theoretical and utilitarian approaches to teaching practice particularly from the point of view of the central issue of instruction versus discovery (inductive and deductive reasoning) which is visualized here in its proper perspective, i.e. according to the relative importance accorded to each on the basis of a consideration of the individual's special style of learning.

The crucial question that is of great concern here is how to tackle the problem of the language complexity factor and the learning complexity factor. One of the major findings of the present study is that the adult L₂ learner is strongly motivated to reduce his learning burden yet he is unable to apply the proper strategies because he finds himself lost amidst the language complexity factor. Despite his ability for abstraction, he is at a disadvantage by being in a position where he thinks that the complex task of learning necessitates the application of a wholistic strategy by which he could concentrate on several aspects of the linguistic system at the same time. Nickel explains how the language complexity factor (e.g. the complex system of syntax) by its very nature can stimulate the creation of such a strategy on the part of the adult L₂ learner:

"One has ... to consider that syntax involves phonology but not vice versa, i.e. attention has to be paid to several phenomena including semantics, morphology, etc. This concentration upon several points at the same time certainly presents greater difficulties than does concentrating on one point like the pronunciation of a given sound. The subtler the distinctions become from an intrastructural point of view the more difficult the items become for the learner." (1)

(1) G. Nickel, op. cit., p. 191.

Unlike the child L_1 learner, who cannot survey all his corpus at once because his linguistic discovery procedure is restricted, the adult L_2 learner is keen on approaching the task all at once, trying to process it as a full corpus - a strategy that confuses him rather than helps him learn the language.

In the context of the present study, however, the adult L_2 learner's deficiency of learning is not due to the age per se, for age is not the crucial independent variable. The crucial variable is, of course, the cognitive style of the person and the strategies he employs to approach the task of learning. His handicap constantly increases because he feels threatened by the complexity of the task. The emotional reaction to the threat posed by the learning task manifests itself in incorrect responses, confusion as well as rigidity of learning behaviour. Pedagogy can have a positive role to play to help adult L_2 learners by recognizing the fact that there are specific styles of learning peculiar to specific types of learner. The different types of performance abilities in L_2 learning reflect a difference in the nature and internal organization of the neuro-functional systems responsible for language learning in (i) the communicatively oriented learners, (ii) the cognitively oriented learners, and (iii) the affectively oriented learners.

These different types of learner are definable by reference to a list of traits which exist in accord with and

follow from basic principles of neural organization. Their process of learning represents the manifestation of these principles in the domain of communication, cognition, or imagination as the result of interaction of their brain systems with the environment.

Their capacity for L₂ learning is based on a neuro-functional programming for the development of neural systems carrying out different kinds of functions. They carry out a special type of learning because their hierarchy of neuro-functional systems operates in different domains (communication hierarchy, cognitive hierarchy ...). Their way of learning represents a special skill schemata, often labelled as infra-systems. These infrasystems are functional constructs of the brain system derived in relation to particular environmental experience. They operate to accomplish given behavioural goals. Some learners, for example, tend to become fluent in the task of production and comprehension of the L₂ communication system if the teaching of the L₂ is integrated into the communication hierarchy of their neuro-functional system that constitutes the basis for those L₂ learners' competence. Others whose neuro-functional system operates on a different hierarchy (cognitive), do not achieve the required communicative competence, even though the two types of learner are exposed to the same learning experience.⁽¹⁾ This point has been confirmed by Krashen who emphasizes that "the relevant primary linguistic data is that which the acquirer is actively

(1) See: J. T. Lamendella, "General principles of neuro-functional organization and their manifestation in primary and nonprimary language acquisition", Language Learning, Vol. 27, No. 1, June 1977, pp. 155-196.

involved with: the total linguistic environment is less important".⁽¹⁾ His article gives more evidence to the fact that (i) formal and informal environments contribute to second language competence in different ways, or rather to different aspects of second language competence, and (ii) the classroom can accomplish both learning and acquisition simultaneously.

It is believed that once the suddenly acquired facility with the L₂ does occur, after the beginning L₂ learner starts accumulating data about the second language according to his own specific learning style, (vocabulary items, helpful expressions, or grammatical rules), it seems to permit a very rapid extension of competence to other domains. This process is what Pike characterizes as the point of nucleation.⁽²⁾ According to Krashen, "Second language performers with highly developed monitors are ... able to out-perform their acquired competence when conditions allow this conscious knowledge to intrude (e.g. when sufficient processing time is available for or when not distracted)."⁽³⁾

The following sections attempt to give some useful guidance for the fulfilment of this objective of how to help the L₂ learners establish the desired nucleation.

- (1) S. D. Krashen, "Formal and informal linguistic environments in language acquisition and language learning", TESOL Quarterly, Vol. 10, 2, 1976, pp. 162, 163, 165.
- (2) K. L. Pike, "Nucleation", Modern Language Journal, 44, 1960, pp. 291-295.
- (3) S. D. Krashen, ibid., p. 163.

Pedagogy and the Predominantly 'Communicatively oriented'
Adult L₂ Learners and a largely Communicatively oriented
Course

For the majority of L₂ learners, the most appropriate type of language competence to achieve is the communicative competence.

With regard to the following question No. 9 in the present study's questionnaire: "Which was more important for you: (a) to communicate your ideas fluently regardless of the grammatical errors you made, or (b) to express yourself with grammatical accuracy, i.e. with conscious attention paid to your grammatical construction at the expense of your fluency?" - many of the answers confirmed the point that one can talk about those who could be classified as communicatively oriented learners. The following reply reflects this point very clearly:

"Languages are for me a source of communication.

I learned or rather picked up the second language by speaking it. I am always satisfied to learn a language so that I am able to communicate with the people - but applying grammar or trying to speak the language perfectly makes me sick."

From analyzing the data and the rest of the answers, it seems that communication is the goal for most of the learners.

The orientation in this case is obviously towards the acquisition of 'communicative competence' by means of communicative activities rather than the conscious knowledge of structure which does not - it is believed - automatically lead

to the ability to use that knowledge in speech. Although language learning is the outcome of the interactional influence of both formal and informal learning experiences, yet the cognitive style of such types of learner is predominantly orientated towards the informal type of learning because they are believed to be relatively weak in grammatical ability but relatively strong in the acquisition of vocabulary and in phonological ability. They are good imitators and use a mixture of correct and incorrect forms.⁽¹⁾ The acquisition of syntax and morphology comes as a second step in this process of learning. This point is made clear by Snow and Hühle who point out that:

"Morphological and syntactic information is acquired first as ways of using specific words. The more words one knows, the faster generalizations about morphological and syntactic processes can be formed. Thus reaching a level of control which allows for productive use of morphological and syntactic rules depends on having acquired a large vocabulary. In first language acquisition, it seems to be the case that a certain minimum vocabulary must be achieved before any morphology or syntax is introduced..."⁽²⁾

Generally speaking, any course of L₂ teaching should be based on providing both formal and informal learning experiences

(1) See: C. E. Snow and M. H. Hühle, op. cit., p. 161.

(2) Ibid., p. 159.

and on a concept of combining the two approaches to teaching L₂ as an experience and in graded structural progression. It is the result of the existence in speech of two phenomena: (i) a large predictable variety of content, and (ii) a rich uncontrolled and unpredictable variety of content (vocabulary, grammatical constructions). Out of the belief that the two streams would presumably have interactive effects came the realization that the second stream would give the learner the specific guidance that would help him in his efforts to master the material in the first stream.⁽¹⁾ Attention should therefore be given to the second stream in the first place, not only in an attempt to facilitate the acquisition of the first stream, but primarily to contribute more towards an account of language as an experience that would offer a characterization of the task of language learning in its communicative/affective context, helping in this way those types of learner who are communicatively oriented. Thus it is the aim of the present section to contribute towards such an account. In doing so, it moves towards a 'functional model' which indicates some of the component skills of communicative ability.

(1) See: H. H. Stern, "Psycholinguistics and second language teaching", in J. W. Oller and J. C. Richards (eds.), Focus on the Learner (New York: Newby House Publishers, 1975) p. 68.

See also: J. B. Carroll, "Learning theory for the classroom teacher", in G. A. Jarvis (ed.), The Challenge of Communication ACTEL Review of Foreign Language Education, Vol. 6, Skokie, Illinois: National Textbook 1974, pp. 140-141.

Implication No. One:

Minimization of the interference phenomenon can to a certain degree be achieved by presenting the second language in the contexts of situation that reflect the way of thinking of the L₂ speakers.

One of the answers to question no. 17 in the questionnaire, "Do you attribute the cause of the errors you made to (a) an incomplete learning of the rules, i.e. uncertainty about their use, or (b) to a negative transfer from your L₁?", tends to prove the effectiveness of the above principle.

"Knowing much about the English culture helped me minimize the negative effect of my first language which usually leads to errors in L₂. I could think in the English language because I lived the experience of this language, but I could never think in Persian or German simply because I could not assimilate their way of thinking.

Words like 'thank you' and 'please' which are, for example, overused in the English culture cause a problem or a difficulty for my native speakers of Urdu who have not learned to live the English language experience. Using them so frequently when he is not used to, would mean that the speaker wants to be very formal or that he wants to show himself off - an embarrassing situation which would create laughter or a funny situation."

The example provided by the child in the field of his L₁ learning indicates that situational rather than grammatical orientation is necessary for L₁ learning to take place. The majority of L₁ learners rely on word comprehension, the situation, their knowledge of the world to obtain sentence meaning. Second language teachers should therefore try to provide multiple avenues to meaning rather than verbal interaction alone. Contextual support geared to his L₂ learners' current level of comprehension skills is necessary. The relation between linguistic forms and their function in speech allows the learners to use language for some purpose, to assume certain roles, and this is extremely useful if the teacher is concerned with teaching his students not just to produce grammatically accepted utterances, but also to use the second language for communication purposes. A successful and efficient language learning programme for these learners is one which ultimately aims at teaching the use of sentences by means of providing opportunities for presenting sentences organized in terms of the situation they share rather than the form they share. The teacher should be in favour of situational ordering rather than of structural grading or ordering of exercise material. The benefit of presenting instances of meaningful use of language built on a contextual base is not only to motivate the L₂ learner but also to help him store, segment and use utterances appropriately in new situations. In language teaching of this sort, it is therefore central to teach the use of language as an act of communication, i.e. to put emphasis on its social function. According to Newmark

and Reibel, the critical point is that unless a learner has learned instances of language in use, he has not learned them as language, and that if he has learned enough such instances he will not need to have analysis and generalizations about those wholes made for him.⁽¹⁾

Since the present study has developed an increasing awareness in the field of L₂ teaching of the importance of teaching communicative competence rather than merely linguistic structural competence for those L₂ learners who are communicatively oriented, it becomes, pedagogically speaking, very important to make decisions about which communicative skills to teach within a much more complex framework than that of the four traditional divisions of levels of skills - listening, speaking, reading, and writing. Teaching the general language skills should be incorporated into more important contextual factors such as, for example, (i) which formality levels ought to be emphasized: intimate, casual, formal? and (ii) how to treat the various domains of interaction: art, music, government, religion, business, home, school? Each level of formality requires a vocabulary, a sentence structure, and a set of attitudes.⁽²⁾

While this approach calls for the L₂ teacher to create a combination of classroom situations and activities that will allow his L₂ adult learners to explore and expand their own linguistic form and have confidence in it, it is faced with the problem of (i) a shortage of sociolinguistic knowledge

(1) N. Newmark and D. A. Reibel, "Necessity and sufficiency in language learning", in N. Lester (ed.), Readings in Applied Transformational Grammar, 1973, 2nd ed., p. 227.

(2) See: L. A. Jakobovits, Foreign Language Learning, (1971) p. 50.

on the part of the teacher himself and (ii) the problem of whether or not a communicative rather than a structural orientation has fully gained his acceptance.

It often comes about that a particular grammatical form, although of a relatively low frequency in the L_2 as a whole, and although it may offer considerable learning difficulty, needs to be taught early in the course, because without it meaningful communication in the classroom is severely restricted. These items can either belong to the grammatical or to the semantic meaning of the message which has to be conveyed in the classroom.⁽¹⁾ In fact, manipulating the grammatical meaning in any particular second language, though highly important, is not enough to guarantee a full knowledge of the essential elements of that language. The semantic meaning is also operative and should also be taught in one way or another. Thus, both meanings have to be known: (i) a knowledge of the structure and (ii) a knowledge of the content and the lexical items. There are some difficulties involved in learning the semantic meaning, however. One of these is the necessity to learn the social convention in the second language in order to understand the meaning properly. The dictionary meaning is never exactly equivalent. The problem of collocation, for example, is a major problem. For even when the L_2 learner has learned the basic grammatical structures of the L_2 , he can still make mistakes. Collocation and idiomatic usage present a major problem in learning, since they are different from one language to another: Examples from English as L_2 -

(1) See: Edmondson et al., op. cit., p. 12.

If I were in your shoes.
 A cake of soap.
 It is raining cats and dogs.
 Winter is round the corner.
 Take it with a pinch of salt.
 Play it cool.
 She gave me the cold shoulder.
 He took a liking to her.

According to Fathman, among others, the establishment of a meaningful learning environment is probably the most important key to successful language teaching; therefore, the structures which are presented first need not be the 'simplest' but the most meaningful.⁽¹⁾ Providing enough variety of material can help the L₂ learner to experiment with the language and extract what he needs for his communication needs. Purely grammatical approaches to language teaching have proved to be insufficient for the purpose of the communicative aspect of learning and for the integration of form and social meaning. Wilkins makes it clear that "with excellent teaching the learner's command of the grammatical systems will be good, but his command of those things not taught will be nil."⁽²⁾

The main finding of this study is that the adult L₂ learner has already developed his semantic competence in his L₁ in such a way that when he starts to learn his L₂ he has an acute need to express a wide range of functions. The difficulty involved has to do with the horizontal level of language, the level of

- (1) A. Fathman, "Similarities and simplification in the inter-language of the second language learners", in S. P. Corder and E. Roulet (eds.), The Notions of Simplification, Inter-languages and Pidgins and their Relation to Second Language Pedagogy, 1977, p. 36.
- (2) D. A. Wilkins, "Notional syllabuses and the concept of a minimum adequate grammar", in S. P. Corder and E. Roulet (eds.), Linguistic Insights in Applied Linguistics, (Paris, 1974) p. 124.

representation below the surface structure, where the learner is faced less with the need to express completely new categories than with the need to (i) adjust his present category system and (ii) to learn to pay habitual attention to categories which would otherwise claim his attention only in specific situations, and (iii) to learn how to realize these categories linguistically.⁽¹⁾ Investigation in this area of learning would offer particularly interesting insights, pertinent in second language pedagogy. It is of primary importance to present the process of a second language learning not as the acquisition of new knowledge and experience but as an extension or alternative realization of what the learner already knows.⁽²⁾ The L₂ learner's basic need in this respect is to gain access to the means to express the most fundamental elements of propositional content and perform some of the most urgent social functions of language. From this point of view, the input of relevant language and its subsequent incorporation into the teaching materials is of fundamental importance.

Since the L₂ learner has already established some kind of semantic competence in his L₁, he tends to carry over some of his L₁ meaningful units into the L₂, or else avoid using the new meaning which appears to be complex to him. In spite of avoidance, the L₂ learner, when forced to, finds other ways of conveying meaning by using various kinds of strategies of

- (1) See: W. T. Littlewood, "Communicative performance in language developmental contexts", IRAL, Vol. XVII 2 May 1979, p. 132.
- (2) See: H. G. Widdowson, "The deep structure of discourse and the use of translation", in S. P. Corder and E. Roulet, (eds), Linguistic Insights in Applied Linguistics, (Paris: Univ. of Neuchâtel, 1974) p. 140.

communication to fill the semantic gap. The use of hypernym, for example, ('flower' in place of 'rose') is one such strategy of communication. Lexical simplification is another. There are two main processes that result in lexical simplification: over-generalization and transfer. These two strategies can either succeed in giving the gist of the communicative meaning or present unacceptable usage, or deviant collocation. Approximation may well succeed as a strategy of communication and also be acceptable. The effects of approximation on communication range from comprehensible though deviant to complete obscurity. Examples:

'Develop' opportunitites - instead of 'exploit': the meaning is clear, because develop has a semantic component (plus use).

He 'gathered' a lot of money - instead of 'earned' : this is unacceptable because 'gather' does not collocate with 'money'.

Sometimes the simplified version is bound to change the connotative meaning.

Skilful use of his L_1 semantic competence can help the L_2 learner's progress. 'Positive' transfer, for example, is probably one of the best ways to increase his control of the L_2 vocabulary. Circumlocution is also a useful strategy when it leads to a meaningful, acceptable usage. A special kind of circumlocution is the use of two words instead of one : 'did not succeed', instead of 'failed', and 'She is not married' instead of 'She is single'. Misuse of circumlocution by learners can produce, however, the oddest interlanguage uses: "My wife does not like to sit on exhausted furniture."

This preliminary survey of some empirical evidence sheds light on the question of the need of L₂ learners for the acquisition of a sort of flexibility in the field of their semantic competence. It is important to note that the L₂ learner resorts to such strategies because he lacks any independent criteria for judging degrees of acceptability in the second language. By his permanent resort to the use of these communicative strategies he is getting worse, for in this way he keeps widening the gap between his interlanguage and the L₂. Corder emphasizes the point that in the formal teaching situation the degree of guidance given by the teacher can positively or negatively affect the discovery processes by the L₂ learner: "... the learner hypothesizes, the teacher tries to guide his hypothesizing to a greater or lesser degree, effectively or ineffectively."⁽¹⁾ For example, the use of the strategy of circumlocution by L₂ learners is encouraged by its use as a teaching device. This may or may not lead to inappropriate usage. In the case of the latter, it is an indication that the L₂ teacher himself is in need of expanding his repertoire of the semantic competence he possesses in the field of L₂ in order to be a reliable source for judging the degree of acceptability and/or unacceptability in the L₂. Since the notion of acceptability plays no role in "pure grammar", the need to move to the field of sociolinguistics, stylistics and semantics to meet the need of the L₂ learner to express a wide range of functions is acute. Such a need could be met right from the beginning by those forms called "prefabricated

(1) S. P. Corder, "Pedagogical grammars or the pedagogy of grammar?" in S. P. Corder & E. Roulet (eds.), Linguistic Insights in Applied Linguistics (Paris: Univ. of Neuchâtel, 1974) p. 170.

patterns". In explaining the significance of these pre-fabricated patterns, Hakuta points out that they enable learners to express functions which they are yet unable to construct from their linguistic system, simply storing them in a sense like large lexical items. "... If learners always have to wait until they acquire the constructional rules for forming an utterance before using it, they may run into serious motivational difficulties in learning the language, for the functions that can be expressed (especially in the initial stages of learning) would be severely limited."⁽¹⁾ As the learner's system of linguistic rules develops over time, the externally consistent prefabricated patterns become assimilated into the internal structure. This process of internal consistency is a slow and gradual one. These 'prefabricated patterns' have to be incorporated in a range of generalized situation types which represent behavioural settings where language functions. This new dimension which seeks to associate language with particular areas of use, is likely to make language learning more successful on the grounds that it provides linguistic forms as a means to an end, and that end is to enable the L₂ learner "to transmit information factually and emotionally and to be able to use language instrumentally to get things done."⁽²⁾

Halliday⁽³⁾ expresses these options in terms of semantic

- (1) H. Hakuta, "A case study of a Japanese child learning English as a second language", Language Learning, 26, 2, 1976, p. 333.
- (2) C. N. Candlin, "An approach to treating extratextual function in a language teaching syllabus", in S. P. Corder & E. Roulet (eds.), Linguistic Insights in Applied Linguistics (Paris: 1974) p. 107.
- (3) M. A. K. Halliday, "Towards a sociological semantics", in M. A. K. Halliday (ed.), Explorations in the Functions of Language, (London, Arnold, 1973)

networks and allows for certain grammatical (linguistic exponents, realisations) options to be pre-selected.

Especially significant for all L₂ learners, particularly from an affective point of view, is the selection of this semantic input for communication, which must then be categorized in a form which will be accessible to the L₂ learner. The following examples, proposed by Candlin⁽¹⁾ and Harlow⁽²⁾ (which are similar to the ones suggested by Wilkins⁽³⁾) demonstrate how a functional unit of instruction might be organized in such a way that language is taught as it is used rather than presented as isolated elements, with consideration given to the motivational factor in the selection of items to be included in the syllabus. The argument is that the use of a range of meaning alternatives that are peculiar to the L₂ can be a useful pedagogic device which has its potential utility for the teaching of L₂ from the point of view of revealing the nature of language in use, and the options open to the L₂ learner both as a hearer and as a speaker. The several examples included here give sufficient clue to the pedagogical question of the organization of language data from which the practical language teaching materials will derive and develop.

The following schema, referred to above, which is proposed by Candlin and Harlow, gives a range of meaning alternatives.

- (1) C. N. Candlin, *op. cit.*, p. 112.
- (2) L. L. Harlow, "An alternative to structurally-oriented textbooks", *Foreign Language Annals*, Vol. II, 1978, p. 561.
- (3) D. A. Wilkins, "An investigation into the Linguistic and Situational Content of the Common Core in a Unit Credit System" (Strasbourg: Council of Europe, 1972) (EDRS:EDO 82545).

It uses the function label 'apology' as language data which show a number of linguistic options and a variety of language uses.

Category: Apology

- (1) Definition of function: Expresses sorrow or regret for mistake or wrong with implied admission of guilt or fault.
- (2) Performative expression: An expression using the verbal form of the functional category. Thus, the performative expression for a unit of apology is the verb 'apologize'.

I apologize for being late.
I apologize that I am late.

- (3) Grammatical expressions: Capable of generating many sentences or utterances having the same communication function.

I must apologize for being late.
I could apologize for being late.
I should apologize for being late.
I want to apologize for being late.
Would you accept my apology for being late?
I'm very sorry for being late.

- (4) Idioms

I'm sorry we weren't on time.
I didn't intend to be late.
I don't know how I got behind schedule.
I guess I blew it. I'm sorry I'm late.

- (5) Implied functions: Utterances which do not express the given function, but imply it and simultaneously suggest an additional function.

It makes me very uncomfortable to come late.
My watch must have stopped.
I'm not very good at apologies.
I wish I had not been late.

Category: Expressing Wishes

- (1) Definition of function: Expresses speaker's want or desire.
- (2) Performative expression

I wish I could go to the movies.
I wish to go to the movies.

(3) Grammatical expressions

I'd like (love) to go to the movies.
 What I'd like to do is go to the movies.
 I want to go to the movies.
 If only I had the money, I'd go to the movies.

(4) Idioms

I'd give anything to see that movie.
 It would make my day if I could go to the movies.
 How I'd like to go to the movies!
 I'd go to any length to see that movie.

(5) Implied functions

I'd much rather go to a movie than study for my test.
 I need to see this movie for my class.
 I wonder if Mom will let me go to a movie tonight. (1)

In an L_2 learning situation, communication failure may be due to unfamiliarity with a language-specific system of categories in terms of the pragmatic rules rather than in terms of the grammatical rules as such. The L_2 learner can call on role-playing skills acquired during his first language development, but his task is nonetheless more complex. By providing the L_2 learner with the L_2 frame of reference ('prefabricated patterns') and the underlying communicative intention, the L_2 teacher can assist his L_2 learners in their role-taking process by familiarizing them with the discourse-organizing devices of the L_2 communicative situation. As a consequence of that, the L_2 learner gradually progresses towards an awareness of verbalizing precisely those elements which would make his meaning clear since they form part of the native-speakers' frame of reference. The sequence of linguistic units offered to the learner would make the task less demanding in the sense that they help him produce sequences of connected discourse and make continuous judgement of shared knowledge. By gradually verbalizing in this way a greater number of elements,

(1) L. L. Harlow, op. cit., p. 561.

the L₂ learner develops his repertoire of categorizations and realizations. He thus unconsciously acquires sensitivity to social conventions which govern the communication situation.

If the communicative aspect is to be stressed, in parallel to the process of L₁ or L₂ learning in a natural situation, then learning L₂ in a formal setting should begin with the mastery of minimal communication strategies in which the emphasis is on verbalizing only the necessary minimum of unshared elements, with a minimum adequate grammar sufficient to meet fundamental and urgent communicative needs. In much of this, the L₂ learner learns to obey not so much the demands of the specific communication situation in which he is involved, as the demands of the L₂ communication system which he is operating, minimizing in this way his reliance on his L₁ system by paying habitual attention to alternative categorization. This process enables him to use communication strategies of a more elaborate nature, to express increasingly delicate categorizations. It also enables him to expand his range of alternative categorizations for the same underlying conceptual intention. This repertoire which he acquires enables him not only to communicate more subtle distinctions, but also to take account of social constraints on linguistic performance in terms, say, of the polite conventions of the social situation that require them. (Perhaps choosing "I seem to have missed the point; would you mind going over it again?", rather than "I did not understand. Repeat, please.")

In an attempt to help the learners make the transition from memorization to communication without the loss of the specific cultural/semantic meaning and accuracy, the teacher should present the L₂ idioms and collocations in a conversational context. The starting point of this approach is not therefore grammar explanation but the living speech made up of meaningful sentences. Organized in this way, the conceptual material to be communicated becomes more and more orientated towards the L₂ learners' needs and the functions language plays in their life. The semantic input can be realized directly in linguistic categories. Similar units based on such functions as asking questions, expressing opinions, making suggestions, can form the underlying conceptual structure which will be verbalized into cognitive-semantic categories and then semantic-linguistic categories. Routine communication situations in which these semantic-linguistic categories are used can ensure their automatization. The degree of automaticity, as it was explained in other chapters, depends on variable factors, such as complexity and familiarity of conceptual and semantic structures, extent of shared knowledge, etc. The frequent use of these idioms and collocations helps the automatization process to take place. Such an approach is based on the 'S-O-R.' theory where imitation, repetition, reinforcement and feedback play a significant role, and it is in one way or another similar to the process of L₁ learning from the point of view of its concentration on meaning and on a stimulus-response type of

learning. From an experimental study of L₂ learning in a natural situation the following learning criteria have been laid down by Hatch. (1):

- I Parts of the language system which are not important to communication are learnt slowly.
- II If a structure is extremely frequent in the input data, the learner will produce it.

Hatch explains that the effects of frequency are modified in a number of ways:

- (i) If a form has a low semantic power, it will be learned late.
- (ii) If a form requires changes in word order, it will be learned late.
- (iii) Forms of low frequency, low semantic power, requiring rules for changing word order, or having a multiplicity of forms (if there are such things) will probably never be acquired.

Hatch emphasizes that these ideas are not new. Slobin, Brown and others have talked of them frequently in discussing first language data.

(1) E. Hatch, op. cit., p. 15.

Implication No. Two:

Second language learners, like children, remember best the items they can interpret, on the basis of the principle - one-meaning-one-form:

In discussing the 'interference' phenomenon many writers find it more useful to discard the strong contrastive analysis hypothesis and evaluate the Stockwell, Bowen and Martin hierarchy of difficulty instead. Susan Ervin-Tripp has also suggested as does the Stockwell, Bowen and Martin hierarchy that interference will occur most frequently (and be more likely to stabilize as a fossilized form) where the form is simple in the first language but complex (variety of forms, variation in word order, etc.) in the second language.⁽¹⁾

This indicates that meaning provides basic categorization devices for mapping of forms. The basic preference is for a principle of one-meaning-one-form. The L₂ learner is likely to reject two forms for what appears to be identical meaning or referential situation. The relationship between the surface structure and deep structure in learning an L₂ can create a problem of ambiguity for the L₂ learner. Although all human languages allow for ambiguity, the different kinds of ambiguity and the different ways of resolving them are a source of difficulty. Some examples of such ambiguity are presented in the following cases where there is one surface structure but two possible different deep structures. The ambiguity in each case is grammatical and not merely lexical. "Flying planes can be dangerous." "She dislikes cooking

(1) See: E. Hatch, op. cit., p. 15.

apples." "I like John more than Mary." Moreover, the L₂ learner is likely to reject two forms for what appear to be identical meaning or referential situation. Ervin-Tripp gives the example of a resistance to correction when the L₂ system is complicated in which case the errors made cannot be attributed to mother tongue interference. In English, for example, there are two different forms for one meaning, "my" and "mine", which may lead to errors for L₂ learners whose first language has only one form. In Arabic, for example, there is only one form for the two forms "how many" and "how much" in English. Many Arab learners of English cannot easily use them with countable and uncountable nouns, owing to the existence of one form for both in their native language. For the same reason, the same difficulty is encountered with the use of "many" and "much", "few" and "little".

Not all of these subtle differences should be introduced at the same time. Teaching the use of the difficult forms should be delayed until that of the less difficult ones has been well reinforced. They can then be contrasted with the use of the more difficult ones.

Pedagogy and the Predominantly 'Cognitively-oriented'

Adult L₂ Learners:

It was pointed out in the previous section that the most valuable contribution to be expected from a notional approach to syllabus construction for the predominantly 'communicative-oriented' learners is in the provision of minimum adequate grammar. The question now to turn to is whether it is reasonable to suggest a replacement of the grammatical syllabus by a notional/functional syllabus for all learners. According to Wilkins, such a suggestion is decidedly premature.

"I suspect that even when we are more knowledgeable about the pragmatics of language, we may still decide that the facts of use are not sufficiently generalizable for them to be suitable as the sole basis for the organization of the early stages of language learning. But that remains to be seen."⁽¹⁾

Wilkins believes that it must be the aim, even in an introductory course, to create conditions for communicative and grammatical facts to be learned simultaneously. The problem cannot be solved, however, solely on this basis. The question of what priority to give to what aspect of learning has to be decided upon primarily in the light of the neurofunctional systems responsible for language learning in the different types of learner referred to earlier in the chapter. If we

(1) D. A. Wilkins, "Notional syllabuses and the concept of a minimum adequate grammar", in S. P. Corder & E. Roulet (eds.), Linguistic Insights in Applied Linguistics, (Paris: Univ. of Neuchâtel, 1974) p. 120.

accept the analytically convenient notion of the division of the neurofunctional system into specific isolatable types, then we can proceed to analyse briefly the contributions of the neurofunctional system of those who are called "rule learners" to language learning itself.

Even though most researchers and educationists would agree that spoken linguistic communication is probably the most desirable goal for learning and teaching the L₂, they should allow for options for those "rule learners" who are believed to show more orderly stages of learning but little variability of forms produced during any stage. Underlying their failure to master the communicative linguistic skills is a general pedagogical problem of a fundamental mismatch between the infrasystem of their neurofunctional capabilities and the demands that are made upon them. The positive aspect of the kind of learning best adapted to their needs manifests itself according to the following explanation given by Snow and Höhle:

"Vocabulary acquisition is promoted by a good control of morphology and syntax, since morphological and syntactic information makes it possible to figure out the meaning of the words encountered."⁽¹⁾

Chomsky (1975) in his critical discussion of speech act theories points out that communication theorists are not

(1) C. E. Snow & M. Höhle, *op. cit.*, p. 159

analyzing "meaning" as such but rather something else: perhaps 'successful communication' "...but communication is only one function of language, and by no means an essential one."⁽¹⁾ Although the concept of the semantic-pragmatic processing has become predominant in the analysis of language learning, yet this type of learner gives more priority to the coding system. Their mechanism of learning depends mostly on cognitive problem-solving systems. The hypothesis is that they may have a poor ability of auditory discrimination but a relatively strong grammatical ability. They may not be oriented towards the types of learning embodied in the communicative use of language right from the beginning, thus it is therefore rather difficult for them to attend to a rapid stream of conversation. After a certain level of proficiency is reached in the field of syntax and morphology, these types of learner find the acquisition of vocabulary and the understanding of word meaning easier.

A number of experiments in this field show that there are behavioural facts whose explanation requires the concept of grammaticality. In one of those studies of grammaticality, Epstein (1961)⁽²⁾ showed that the syntactic structure of verbal material facilitates its recall over and above the effects of meaning or informational considerations. Epstein required people to memorize two kinds of material, grammatical and ungrammatical. He reached the conclusion that the

(1) Quoted by A. Karmiloff-Smith, A Functional Approach to Child Language, 1979, p. 20.

(2) See: R. Lachman & E. C. Butterfield, Cognitive Psychology and Information Processing: An Introduction, (New York: John Wiley & Sons, 1979) p. 381.

differences in memorability were due to the differences in grammatical information, and that syntax has some psychological reality. In addition, Miller⁽¹⁾ provided several experimental demonstrations of the importance of grammar to psychological processes. Johnson's⁽²⁾ (1965) research also meant to see whether linguistic accounts of grammar were psychologically useful. These studies have been able to demonstrate the importance of grammaticality to both perception and sentence recall.

Much of the cognitively-oriented L₂ learners' difficulty with the second language arises because they are sometimes required to operate along a level of competence contrary to that they have been used to throughout their experience with the L₂. For the cognitively-oriented learners, language learning is an intellectual process involving the rational induction of the language rules by a sort of cognitive problem-solving system as well as conscious hypothesis testing. Knowledge of the language is in this way not integrated into the communication hierarchy of the neurofunctional system of the learner but operates within the cognitive hierarchy. Such learners tend to be nonfluent in their comprehension and production of the second language during communicative interactions. Their general need for conscious monitoring in their performance and their application of formal cognitive operations inhibit their facility for achieving communicative competence. A second factor which makes their process of

(1) & (2) See: R. Lachman & E. C. Butterfield, op. cit., pp. 381-394.

learning inappropriate to achieve successful communicative competence is that they tend to give more priority to the coding system than to the semantic-pragmatic processing. Because the human information processing systems are limited in the number of processing activities capable of simultaneous execution, it is difficult for this type of learner to attend to a rapid stream of conversation while carrying out different cognitive activities. Comprehension and production is better when the L₂ learner of this sort is reading or writing the L₂, since time is then available for other activities to be carried out adequately. The conscious rational approach of the cognition hierarchy is well-suited to special forms of language learning such as reading or translation. These learners may be better off achieving this form of second language competence than other forms (communicative competence, for example): to read technical literature in a second language or to translate written texts in general.⁽¹⁾

In his article, "Why speak if you don't need to ...", Gary⁽²⁾ strongly argues that a beginning second-language learning course should be based on listening rather than on a speaking approach, the main advantages of which are:

(i) The cognitive advantage, (ii) the affective advantage, (iii) the efficiency advantage, and (iv) the utility advantage. First, from the cognitive point of view, delaying oral practice to language learning would lead to the advantage that the

- (1) See: J. T. Lamendella, "General principles of neuro-functional organization and their manifestation in primary and nonprimary language acquisition", Language Learning, Vol. 28, No. 1, June 1977, p. 181.
- (2) J. O. Gary, "Why speak if you don't need to? The case for a listening approach to beginning foreign language learning", in W. C. Ritchie (ed.) Second Language Acquisition Research, 1978, p. 190.

learner does not need to focus simultaneously on speaking performance and on listening comprehension, and consequently does not become distracted from his main objective of understanding the language system underlying what he is learning. Gary argues that requiring learners to produce material they have not yet stored in their memory will lead to language interference and overload of short term memory.

With respect to the affective advantage, "for many learners, particularly older children and adults, an attempt to produce sentences immediately in front of others is very stressful and embarrassing and reduces the learner's concentration and effectiveness in language learning. Even an apparently 'simple' production task such as mere mimicry requires considerable effort.

With respect to the efficiency advantage, clearly the case is that in second language learning, as in first language learning, there is a considerable lag between the development of one's receptive competence and one's productive competence. One can learn language much more efficiently if one does not have to worry about producing all the language data to which one is exposed. The lower aptitude students absorb language much faster and more efficiently when not required to speak.

As for the utility advantage, it is often the case that receptive skills - listening, comprehension and reading - are more needed by the second language learner than the productive skills. Stork convincingly argues that for many people

reading is the most useful of all the language skills. As a receptive skill easier and quicker to learn than the expressive skills of speaking or writing, it "brings the greatest reward in the shortest time". He, therefore, calls for a reversal of the traditional emphasis towards a new orientation that would regard the acquisition of a reading knowledge in L_2 as the basic knowledge to be acquired because it would reflect the real life demand for communication across language barriers much more realistically. "Learning a second language," he says, "is always an artificial process, and we should not assume that the spoken language should come first just because this is the case when we acquire our native language, or because this was most likely the case in the development of language in the human race as a whole."⁽¹⁾

For these learners, it may be a mistake to employ a teaching methodology that prompts the learners to engage the communicative hierarchy right from the very beginning. For an early triggering of the learner's ability to get motivated, it is necessary to provide the right data in the right time. To develop the motivation of this type of L_2 learner and to satisfy their learning needs, it is necessary to design a course that is given a conventional grammatical/structural organization. The objective is to produce "grammatical competence" that can be utilized later for the development of other types of competence. The syllabus can be clearly grammatical in organization so as to help these learners

(1) F. C. Stork, So You Want to Learn a Language, 1976, p. 53.

establish mentally a schematic overview of structural relations or grammatical rules which help them recognize structures and patterns, thus making more comprehensible to them the differences between the L_1 grammar and the new L_2 grammar at a basic conceptual level. It is, therefore, obvious that this approach rests on conscious learning rather than on unconscious acquisition. It is an inevitable approach, however, since these L_2 learners in comparison with the communicatively-oriented learners are dependent mostly on the cognitive hierarchy which helps them absorb abstraction and learn by comparison.

The extra ability of these learners to reason, to analyze, to regularize, and to compare is an asset which should be taken advantage of to help them take a sort of a short-cut in their learning. 'Grammar awareness' is of use for the deeper comprehension of the proper structure of language, and is an attainable goal for these L_2 learners. An example which illustrates the way in which this unique capacity of these adult L_2 learners could be taken advantage of in teaching is taken from the following sample of Miller's study of the effects of relationships among families of sentences. By appealing to these learners' ability to generalize abstract concepts, such an approach could be of great benefit to such learners. Their ability to recognize the patterns and to compare, however, reflects their cognitive ability for problem solving and learning by abstraction. The examples given here illustrate the point relevant to the present discussion.

that language learning can be viewed from the perspective of problem-solving, because language needs to be sorted, classified, compared and gradually organized into systems of relevant options. The orientation is clearly grammatical. If the grammatical categories negation, question, passive, active are to be taught, then the relationships between sentence types should be demonstrated to illustrate the number of transformations needed to transform one sentence type into another as is shown in Miller's following figure:

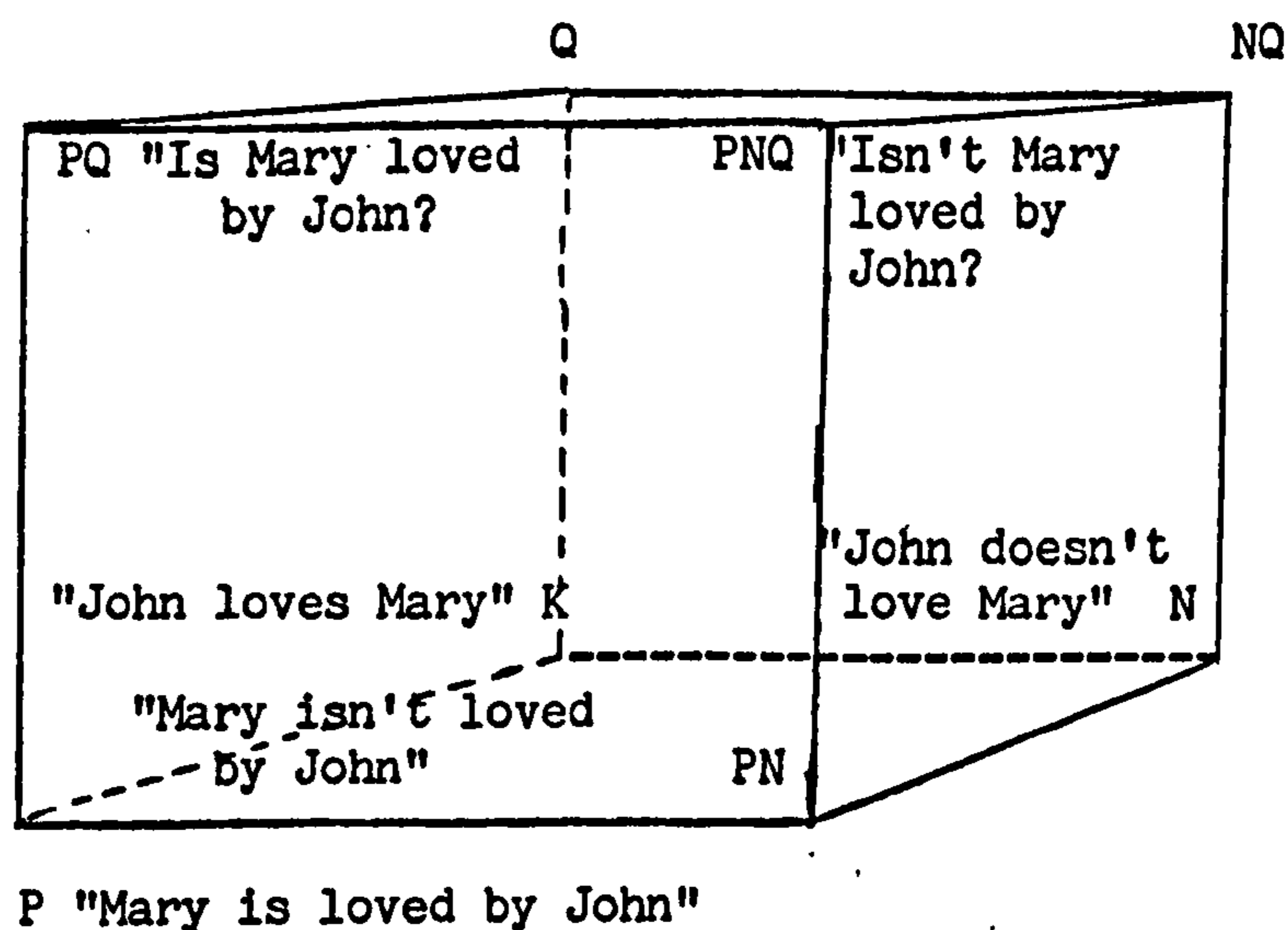


Figure No. 5 Illustration of the number of transformations between sentence types.

(P = passive, N = negative, Q = question, K = kernel)

Each edge of the cube represents one grammatical transformation. The number of edges that must be traversed to move from one sentence to another equals the number of grammatical transformations required to convert either sentence to the other. Thus, from kernel (K) to negative (N) involves only one transformation; only one edge must be traversed to get from (K) to

(N) in the diagram. To go from the kernel to the passive negative (PN) requires two transformations. The maximum number of transformations is three, as from the kernel to the passive negative question (PNQ).⁽¹⁾

This kind of 'discovery approach' to the relationships among sentences in the classroom is based on the cognitive-discovery view of learning. It takes advantage of the tendency for adult L₂ learners to want to find answers to problems of structure. It stresses relationships in what is presented and urges the L₂ adult learners to seek patterns for themselves. The learning situation is arranged in such a way that discovery of relationships is likely to take place.

It is obvious that such sentences do not perform any communicative function for these learners. It has to be admitted, therefore, that a course designed on such a basis does have certain limitations. What the learner may be able to acquire at the end of such a course is only part of the language system, because the structuring of the language content has been of maximal grammatical value. The approach makes it almost inevitable that partial rather than whole systems are learned. To compensate for the deficiency, however, the concept of a minimum semantic categorization may be suggested for L₂ learners of this sort which will be the most valuable contribution to be expected from such a grammatically-oriented approach to syllabus construction. The size of the vocabulary to be learned is not as important

(1) Quoted by R. Lachman & E. C. Butterfield, op. cit., p. 385.

as the quality of such vocabulary which should be built on the basis of the concepts of (i) hierarchy of difficulty and (ii) familiarity versus unfamiliarity. This shows the interrelationship between the 'four-factor' theory and the assimilation theory of Ausubel et al. discussed in this thesis on pages 109 and 110.

Implication No. Three:

Language Learning Depends on the Relevance of Relationship.

From the psycholinguistic viewpoint, the difficulty of a learning material seems to consist of some factors which reflect the relationships between previously learned items and new items to be learned. In psychology, it is assumed that in general the learner finds learning material difficult to learn, if it has no relation, association, or similarity to any of the materials he has already learned.

This is a qualitative matter as well as quantitative. It is much more than how much experience - it is what kind of experience and what meaning it has. This sort of interaction between new and previously learned material is studied in verbal learning experiments in terms of meaningfulness and familiarity. On these grounds, it has been suggested that the 'difficulty' of a foreign word depends not so much on how it sounds as on how meaningful and familiar its translated meaning is to the learner.⁽¹⁾ The significance of meaningfulness in L₂ learning is unquestionable because of the associative value of the process. According to Higa's interpretation, the meaningfulness of a foreign word to be learned depends on its accidental phonetic similarity in whole or part to some word in the learner's native language. In this situation, he suggests that the textbook-writer may arrange learning materials systematically so that words taught earlier will increase the meaningfulness of words to be

(1) M. Higa, op. cit., p. 172.

introduced later. One crucial example he gives is the introduction of words like mean, meaning, meaningly, meaningful, meaningless, meaningfulness in sequence at different intervals, because the preceding one can increase the meaningfulness of the following one. These words are phonetically meaningful, but this is only one aspect of meaningfulness. There are two different degrees of meaningfulness in this respect: the foreign words and their translated meanings. A foreign word may have high meaningfulness phonetically but its translated meaning in the learner's first language may have low associative value and vice versa.

Familiarity: This factor of familiarity is very closely related to meaningfulness. The familiarity value of a word is measured by the frequency of its usage. The more frequently a word is used, the more association value it acquires and the faster it is learned. By exposing the learner frequently to unfamiliar words presented in their appropriate contexts, the L₂ teacher can increase the familiarity value of unfamiliar words.

Other important variables in terms of which the organization of L₂ teaching materials and the writing of textbooks for the achievement of optimum learning may also be considered on the basis of a psycholinguistic concept and measure of difficulty derived from studies in first language acquisition.

In their study of the semantic complexity for L₁ learners, Clark and Clark⁽¹⁾ emphasize that even after taking into account

(1) See: H. H. Clark & H. V. Clark, Psychology and Language 1977, pp. 487-488.

such factors as familiarity, the easy-to-difficult order is significantly more facilitative in learning words than the difficult-to-easy order. In one of their verbal experiments which was meant to investigate this point, the writers found out that the complexity of the concepts expressed is one important determinant of the order in which children acquire word endings. Like word endings, the meanings of some words are more complex than others. One hypothesis upon which they built their interpretation is that the more complex meanings include simpler meanings plus other components (e.g. the difference between the meanings of father and great-great-grandfather). The meaning of father is easier to acquire, while that of a great-great-grandfather is more difficult since it represents a more complicated combination of components that includes the meaning of father; i.e. "A male parent of a parent of a parent of someone." Thus, "in these semantic fields, the simpler meanings should be worked out first and then the more complex. In other domains, the words hardly overlap at all, and in this case, learning them depends on some other factors such as exposure to specific words in specific context. This leads to implication number four.

Implication No. FourContextual Support Geared to the L₂ Learner's level of Competence and Comprehension is Necessary.

Good L₂ teachers should provide multiple avenues to meaning appropriate to the developmental level of their L₂ learners' comprehension. This is so essential because of the well-established fact that meaningful teaching - i.e. teaching by using realistic situations in which the meaning of the grammatical form being taught is made clear is better than the teaching of forms unrelated to a meaningful context. The teacher may choose, according to his own particular methodology, to set up the situation with role playing activities, with visual aids, through playing recordings, or using the language laboratory. Furthermore, he may choose to give a formal explanation of the grammatical point in question before the situational practice, after it, or not at all, according to his assessment of the type of L₂ learners he is dealing with. The teacher can expand or situationalize a particular grammatical difficulty from suggested samples in the textbook, more realistically himself.

Implication No. FiveChunking and Short-term Memory:

It has been shown in other chapters that short-term memory is a critical component for decoding language. Using sentences which contain more than eight words should be restricted until all the base structures are well understood.

Acquiring categories and grammatical forms allows these L₂ learners to chunk units which would have originally exceeded their short-term memory span.

Pedagogy and the Affectively-oriented L₂ Learner:
The Concept of "Language as Art". Learning by
Empathy and by Storing Mental Images.

Researchers in the field of language learning have come to acknowledge the fact that language performance can in fact be studied from two different angles: (i) as a cognitive intellectual skill, and (ii) as an affective behaviour that is tied to self-representation.⁽¹⁾ The affective factors are sometimes labelled the emotional or the 'non-rational factors'. Kidd explains the role played by the emotional factors in the field of learning in the following way:

"It is ... worth noting that not only these emotions influence learning, but that there are many similarities between the 'field of emotion' and the 'field of learning'. Both learning and emotion are aspects of the same process of adjustment to environmental situations which the person must make continuously. Feelings are not just aids or inhibitors to learning; the goals of learning and of emotional development are parallel and sometimes identical and can be most conveniently stated as self-realization and self-mastery."⁽²⁾

- (1) A. Z. Guiora et al., "Language and person: Studies in language behaviour", Language Learning, Vol. 25, No. 1 1975, p. 46.
- (2) J. R. Kidd, How Adults Learn (1973), p. 93.

Thus, in order to discuss the specific needs of the so-called affectively-oriented L₂ learners who use language primarily to satisfy their imaginative, affective mental skills and activities, there is something to be said for correlating L₂ instruction with the specific type of function that the adult L₂ learner believes that the L₂ language can serve for him. The match between the L₂ learner's functional use of language and that of the teacher represents in fact a cognitive-linguistic match. A mismatch can occur if, for example, the L₂ learner tends to use language primarily as an imaginative means, and his teacher uses it as, say, an expressive or referential means. Control or feedback can take place positively or negatively depending on the extent to which the L₂ teacher accepts or rejects the L₂ learner's utterances. There is an intimate correlation between this field of L₂ learning and that of the development of L₁ in the young child.

Nelson⁽¹⁾ has collected data from children and their mothers and has presented some case studies that are suggestive of what the most and least beneficial interaction patterns are. She found mismatched uses between parent and child and rejection of the child's use of language to be correlated with poor language development.

Besides providing a framework for consideration of how language is acquired, Nelson's model has implications for the relationship between cognition, language, and pedagogy. She

(1) K. Nelson, "Structure and strategy in learning to talk", Monographs of the Society for Research in Child Development, 38, Ser. No. 149, 1973, p. 96.

states this relationship clearly in her following remark on the subject:

"... the present model shows why some children who are not inherently slow learners or poor conceptualizers may be slow in learning the language because of deviant conceptual system (e.g. Mismatch-Referential-Acceptance and Mismatch-Expressive-Acceptance)."⁽¹⁾

Another aspect of Nelson's model, which is relevant to our discussion in this section, is that it assumes children's language learning to be highly child-directed. The adult can be a facilitator or inhibitor of the child's language development. She assumes that the adult can have very little success in imposing his functional view of language on the child or in changing the child's approach.

Because the concept of the interaction of linguistic function and the neurofunctional system of the learner is an important one for the understanding of the role of pedagogy in the field of language teaching, it is relevant to refer to the imaginative function of language as one of its multiple manifestations. It is through this imaginative function that language is used not to learn about how things are but to make them as one feels inclined. "From his ability to create, through language, a world of his own making (the child) derives the imaginative model of language."⁽²⁾

(1) K. Nelson, op. cit., p. 117.

(2) M. A. K. Halliday, Explorations in the Functions of Language, (London: Edward Arnold Publishers Ltd., 1973) p. 15.

In describing language in its imaginative function, Halliday clarifies the idea of how the child's linguistically-created environment differs from the world of experience around him, since it may not be a make-believe copy of it, but a world of pure sound, made up of rhythmic sequences of rhyming syllables. "Poems, rhymes, riddles and much of the child's own linguistic play reinforce this model of language, and here the meaning of what is said is not primarily a matter of content."⁽¹⁾ The child's word meanings do not always reflect the general knowledge, thus it is insufficient from this point of view to interpret the process of acquisition simply from the cognitive perspective of a rather logical, rational form of thought operated by the child as some investigators do.⁽²⁾ The mental skills and processes applied can be viewed in fact both in terms of logical, scientific, rational form of thought on the one hand, and the emotional, aesthetic, imaginative or affective form which does not necessarily always conform to the general knowledge, on the other hand. According to Gardner et al.,⁽³⁾ the affective consideration seems to be a more promising domain in the interpretation of the mental skills involved in language learning. Creative, imaginative individuals such as artists and inventors tend to engage their affective mental skills and the aesthetic forms of thought. Some second language learners may depend on the same process as well. In their recent book (1979)⁽⁴⁾ entitled Cognitive

(1) M. A. K. Halliday, op. cit., p. 15.

(2) K. Nelson, "Semantic development and the development of semantic memory", in K. E. Nelson (ed.), Children's Language, 1978, p. 69.

(3) H. Gardner et al., "The development of figurative language", in K. E. Nelson (ed.) Children's Language, 1978, p. 29.

(4) R. Lachman & E. C. Butterfield, op. cit., p. 397.

Psychology and Information Processing , Lachman and Butterfield, in their discussion of the psychological reality of grammar, semantics and pragmatics, have touched on this important aspect, which they regard as a challenge to the primacy of linguistic factors in language processing studies. From experiments on imagery, they have acknowledged the importance of mental images as a powerful storage modality, in the sense that language learners or users have a choice of strategies either to encode linguistically or encode imaginatively. For example, when a person hears the sentence: "The truck hit the car", he could store it as a linguistic deep structure and, upon recall, consult his linguistic representation to produce a correct answer in sentence recognition or verification tasks, or he might store a mental image, rather like an internal pictorial representation of a truck hitting a car. Upon request for information about the previously presented sentence, then, the subject may consult a pictorial not a linguistic representation. This idea stresses the imagery value of certain words for certain types of individual who tend to construct a mental image rather than a linguistic representation, as any imagery theory views this kind of process to be. Confirming the importance of this process, the writers point out that "psychologists considered deep structure as a mode of memory storage, but mental images can also be a powerful storage modality (Pairio, 1971)."⁽¹⁾ To give a concrete example of how such imagery process can take place, we can take Chomsky's famous example, "colourless

(1) R. Lachman & E. C. Butterfield, op. cit., pp. 396-397.

green ideas sleep furiously", which has ill-matched semantic components. By resorting to an imaginative strategy, such a sentence is made semantically acceptable by Bernstein who imaginatively used its components in a sort of poetic matrix to make it perfectly acceptable, "even witty or ironic, may be even sort of beautiful - especially as twentieth century poetry. Just read the line aloud slowly," he says, "with solemn intonation: 'Colourless green ideas sleep furiously'. Isn't that impressive? I could even make a prose deep structure for that line ... something like this: 'Last night I slept badly; my usually colourless dreams were invaded by sort of dirty green ideas, which caused me to sleep fitfully and to toss furiously'." (1)

The aesthetic force of creativity, which represents in some individuals, a strong universal characteristic of the human nature can be reflected in language; hence the term "language as art" used by Halliday (as opposed to "language as system", "language as behaviour", "language as knowledge") tends to reflect the affective element involved.

In the language learning process a kind of interaction between the human nature and the language at this aesthetic level might take place. Since in some L₂ learners the aesthetic force is enormously influential because it touches on their strongest emotions, learning becomes easier as a result of linking the two forces together. Talking about this aesthetic force and the force of the innate responses

(1) L. Bernstein, The Unanswered Question: Six Talks at Harvard (Cambridge: Harvard Univ. Press, 1976) p. 368.

it creates in the individual, Bernstein says:

"My words are poor, my diagrams are even poorer, but this one thing I know intuitively to be true, and I will put my fingers in the fire for it: that whatever that creative mystery is, those mystical matchings and mismatchings in the upper circle, it cannot exist or come to be, unless it is inextricably rooted in the rich earth of our innate response, in those deep unconscious regions where the universals of tonality and language reside." (1)

The various affective and attitudinal reactions that the denotative meaning of words elicits in each learner, depending on his own orientation and psychological make up, constitute the connotative meaning of them. In the case of the L₁ learner, some words have a vitality and significance, that go deeper than the objective meaning of them. Thus learning the first language is in this way relatable to the cognitive-affective social structure of the L₁ learner.

Apart from learning by means of storing a mental image, there is in addition learning by means of another learning process, that of "empathy". It is said that language serves as a screen between ourselves and the world. It filters our

(1) L. Bernstein, op. cit., p. 417.

perceptions of persons and things.⁽¹⁾ It is this particular element which facilitates "the compassionate identification with another individual" which underlies the process of empathy.⁽²⁾ Gaining insight into the feelings of others is a necessary step towards identifying with another individual.

Guiora et al. have distinguished three kinds of comprehending modalities: (i) inference, (ii) intuition, and (iii) empathy.⁽³⁾ These three terms denote three different kinds of process. The writers have focused their study of second language learning on one of these comprehending modalities, namely empathy. Empathy has been defined by them as "a process of comprehending in which a temporary fusion of self-object boundaries, as in the earliest pattern of object relation, permits an immediate emotional apprehension of the affective experience of the other, this sensing being used by the cognitive functions to gain understanding of the other".⁽⁴⁾ With the hope of establishing a connection between empathy and second language learning, Guiora et al. have selected the realm of pronunciation as a behaviour for transposing the study of empathy, on the basis of their firm belief in the influence on the language learning process of the developmental ego-psychological factors.⁽⁵⁾ By emphasizing these new factors, the writers have not discounted the other factors involved which partly account for the reduction in pronunciation skills at puberty (progressive loss of flexibility of the speech

(1) B. W. Eakins & R. G. Eakins, Sex Differences in Human Communication, 1978, p. 112.

(2) See: P. D. McLean, "The brain in relation to empathy and medical education", Journal of Nervous and Mental Disease, 144 (1967) pp. 374-82.

(3) A. L. Guiora et al. op. cit., p. 43.

(4) Ibid., p. 44.

(5) Ibid., p. 46.

organs: Sapson 1962). With this kind of investigation which takes the empathic capacity into account, the writers have given some new insight into the process of language learning which is not based solely on cognition. Their new insight views the process in the context of the self with which it is closely tied. "Ask me to change the way I sound", they say, "and you ask me to change myself. To speak a second language authentically is to take a new identity. As with empathy, it is to step into a new and perhaps unfamiliar pair of shoes."⁽¹⁾ The ability to step outside one's "language shoes" means expanding one's identity in some way, and this is closely related, according to Guiora et al.'s hypothesis, to an internal psychological process, i.e. empathic capacity. This internal capacity is directly related to the external observable language behaviour, especially in the field of pronunciation. Empathic ability is therefore, prerequisite for successful communication; it involves role-taking in the socialization of the individual. In linguistics and philosophy, pragmatics is the concept which comes closest to reflecting the idea of the behavioural implications of an utterance for both speaker and hearer, although it does not necessarily raise the questions concerning the psychological processes underlying the relative success or appropriateness of an utterance. This is a fundamental issue which is lacking in studies of the pragmatics of communication primarily because as Guiora et al. put it: "Whatever construct one uses, it is, we think, impossible to attempt to understand communication in depth without using some concept which takes

(1) A. L. Guiora et al., op. cit., p. 48.

into account the wealth of non-grammatical knowledge that human beings bring to bear on their communication with others.

The writers proceed to talk about 'firm boundaries' and the range of 'flexibility or plasticity of ego boundaries' and the implication of this for first and second language learning. They point out that "... the early flexibility of ego boundaries is reflected in the ease of assimilating native-like pronunciation by young children; the later reduced flexibility is reflected in the reduction of this ability in adults. At this point we can link empathy and pronunciation of a second language. As conceived here, both require a temporary relaxation of ego boundaries and thus a temporary modification of self-representation."⁽¹⁾ Their underlying hypothesis is that altering the sound of one's speech is a process of altering one's self-representation, and such alteration requires some degree of flexibility of psychic processes or permeability of ego boundaries. The proposed link between empathy and pronunciation comes about as a result of the writers' belief that "both pronunciation ability and empathy are profoundly influenced by the same underlying processes, namely permeability of ego boundaries".⁽²⁾ Their predication has been that increased flexibility would lead to more authentic pronunciation of foreign sounds. Experimentally attempting to increase this flexibility by lowering inhibition through low to moderate doses of alcoholic drinks which help enhance certain types of behaviour, Guiora et al. confirm that the

(1) A. L. Guiora et al., op. cit., p. 46.

(2) Ibid., p. 45.

findings of their study were highly significant because such findings could confirm their hypothesis about the nature of the psychological processes involved in pronunciation ability.

A number of implications can be listed as a result of this particular dimension of language and some L₂ learners' reactions to it.

Implication No. SixThe Development of the Emotional Processes of Empathy has its Cultural and Educational Value:

The cultural content should represent an interesting experience to the student so that it may become an enthusiastic event in his educational development.

Freeman suggests in this context that "we must provide ideas and content which excite the learner, which create an urge to respond, and which he feels it worth while to work with. We must realize that there is no inherent magic in a foreign language class. Empty, stupid phrases carry the danger of persuading the pupil that the (foreign people) are stupid and shallow".⁽¹⁾ While Freeman warns us against following the usual 'wrong' procedures which involve the provision of merely factual information, dates and proper names for the students as a basis for their cultural experience, he suggests material of human interest, opinions, insights, morals and personalities which are, in his view, far more significant than facts to memorize. "Our ... pupils respond at once to the categories of activities that touch them personally; clothing, sports, prices of things, the other sex, geography in terms of travel, history in terms of heroes and villains, literature in terms of a good story, politics in terms of opposing points of view. The necessary factual information will be acquired in one way or another, once the need is recognized by the student."⁽²⁾ On such grounds, Hocking voices the plea to substitute 'language and culture' in place

(1) S. A. Freeman, "Modern language teaching: problems and opportunities for the Seventies", MLJ, LV, 1, Jan. 1971, p. 143.

(2) Ibid., p. 143.

of the traditional 'language and literature', which implies that the only purpose of language study is to read literature. (1)

In the framework of the present study both culture and literature have their significance: the teaching of the cultural element would be most suitable for those L₂ learners who build up their language learning on the process of 'empathy', while the teaching of literature would suit those learners who are imaginatively-oriented and learn by mental images.

The place of literature in a second-language teaching programme has been an important topic on the agenda of some linguistic conferences. At the Uppsala Congress, 1964, the majority of the participants accepted the new practical aims of second language teaching, but there were some who regarded the teaching of literature as the only proper aim of teaching a second language. Lado believes that "in actual fact, if our goal is to understand and to express the target language and culture, both points of view complement each other." (3) Kenworthy conceives of literature as the most enriching factor at the feeling level in promoting internationally-minded individuals, and therefore calls for exposing the students to the expressive life of other people through their literature. (4) A number of psycholinguists are in favour of a sort of

- (1) E. Hocking, "The sound of pictures", MLJ, LII, 3, March 1968, p. 143.
- (2) See: P. Strevens, Papers in Language and Language Teaching, (London: Oxford University Press, 1965) p. 27.
- (3) R. Lado, op. cit., p. 27.
- (4) L. S. Kenworthy, The International Dimension of Education, (Washington: Association for Supervision and Curriculum Development, NEA, 1970) p. 75.

compromise solution which combines the benefits of the two approaches, the practical objective and the literary objective. Rivers, among others, believes that "the literary objective may be pursued side by side with the cultural and linguistic objects".⁽¹⁾ The Northeast Conference on the teaching of second languages held in 1961 did not ignore the literary objective, but considered it to be implicit in the lists of objectives which were agreed upon by the participants:

"Since language is the chief element of which literature is made, the development of language competence cannot fail to strengthen the understanding of literature. In suitable proportions, selected samples of good literature are important in language programmes from the beginning."⁽²⁾

Since there are some problems connected with the teaching of literature, it is inevitable, from the pedagogical point of view, to search for solutions to the problems involved. Catford categorizes the problems into the two following types: (i) the linguistic difficulty and (ii) the cultural difficulty. With regard to the first type, he states that the language of literature is a specialized usage and, therefore, requires a rather advanced linguistic knowledge and experience before literature can be understood. Moreover, the other difficulty

- (1) W. M. Rivers, The Psychologist and the Foreign-Language Teacher (London & Chicago: University of Chicago Press, 1964) p. 17.
- (2) Northeast Conference on the Teaching of Foreign Languages Reports of the Working Committee III, (Princeton, 1961) p.18.

which literature raises in the context of L₂ teaching is a cultural one. The literary subjects may be too obscure in their content to catch the interest or imagination of the L₂ learners.⁽¹⁾

The suggestion given for tackling the linguistic problem may be borrowed from Lado's distinction between the technical and non-technical information in the teaching of literature. Technical information is defined as that which is necessary for a literary critic in the performance of his professional work. Non-technical information, on the other hand, is an appreciation of the major works of literature of a people. Therefore, "to demand that a person learning a second language acquire the technical knowledge of a literary critic is unwarranted, but to demand a degree of appreciation of major literary works is justified."⁽²⁾

A suggested solution for the second problem which is a cultural one can be taken from Halls: "Preference should be given obviously to modern writers. ... The rationale of such a procedure of reading modern literary works is to give the pupil a taste of the foreign literature and to wet his appetite for further study in higher education."⁽³⁾ This emphasis on the contemporary scene is also intended to provide the learners with cultural experiences that are relatively not far beyond nor quite remote from their present needs and interests.

- (1) See: J. C. Catford: "The teaching of English as a foreign language" in Quirk & Smith (eds.) The Teaching of English, (London: Oxford University Press, 1964) pp. 144-145.
 (2) R. Lado, op. cit., p. 27.
 (3) W. D. Halls, Foreign Languages and Education in Western Europe, (London: Harrap, 1970) pp. 41-43.

Implication No. Seven

Continued learning depends on the achievement of satisfaction:
Both security and stimulus are essential.

An efficient way of providing incentive for learning the L₂ would be to make the activities of the second language learning closely interrelated with those of language functions. Halliday identifies three basic language functions: personal, representational, and imaginative. Roughly analogous to these functions are Cazden's, Baratz's, Labor's and Palmer's, which they call (i) speech for self-aggrandizement, (ii) language for explication, and (iii) language for aesthetic pleasure.⁽¹⁾ The L₂ adult learner might like to use the second language for self-aggrandizement during almost any activity, or he might sometimes use it for aesthetic pleasure; simply to please himself by playing with sound and meaning. The achievement of these functions can only occur in a classroom environment where adult L₂ learners feel that speech-play is permitted and appreciated by those around them, and that a relaxed, friendly environment is provided for them to feel free to express themselves openly without the teacher's corrections of their speech. Cazden, Baratz, Labor, and Palmer explain the value of creating classroom situations in which there is room for playing with language: such activities are most likely to demonstrate skills on the part of the learners which would go far beyond any current programme of instruction: play is a kind of exploration, a kind of trying out.

(1) R. Moses, H. Daniel and R. Gundlach, "Children language and the multicultural classroom", in D. C. Cross et al. (eds.), Teaching in a Multicultural Society, 1977, p. 94.

Cazden⁽¹⁾ has suggested that language play is also related to the development of metalinguistic awareness - awareness of language itself rather than regarding it only as a "transparent" medium through which meaning passes. Moses et al.⁽²⁾ on the basis of these three main functions of language, conclude that if language is to be of value, then two kinds of activities - both within the structure of students interacting with other students - can be encouraged.

Teachers can arrange for a variety of organized activities that involve language play, ranging from creative dramatics to commercially produced word games. One of the answers to the present study's questionnaire came from an English girl who learned and taught French as a second language and who resorted in her teaching to a kind of aesthetic experience that helped in linking the cognitive factor with that of the affect:

"The acquisition of a second language is very much a musical experience. I have never met, for example, a person who was particularly skilled in foreign languages, who had not also a keen ear for music. Music and language go together because each share the similarity of combining sounds and varying tones. We can even go as far as to plan the 'tune' of a given sentence as it rises and falls. In the teaching of a second language, a teacher may often find it more helpful to suggest

- (1) C. Cazden, "Play and Metalinguistic awareness: One dimension of language experience", *Urban Review* 7, 1, January 1974, pp. 28-39.
- (2) R. Moses et al., op. cit., p. 94.

the musical sound of the language to the students in order not only to feel it in a more profound way but also to pronounce it more easily. For example, when I was teaching English to French schoolchildren I found it helpful to 'sing' out the sentence. Somehow, it would then appear much more fluent to the children and they would find it much easier to combine the words into a flowing sentence. The words were no longer obsolete sounds but rather meaningful parts of a musical sequence. It appears to me as if there is a link between all the sounds of nature."

This idea has been emphasized by Bernstein in his book, The Unanswered Question. He makes a comparison between what he calls the 'super-surface structure' of both music and language and finds that these two aesthetic surfaces match together. On this plane of thought, Bernstein believes that the concept of musical thought and verbal thought become comparable, where musical and nonmusical ideas can coincide.⁽¹⁾ This aesthetic force of creativity in language which reflects the emotional element is extremely influential because it touches on the emotions of the learners, making the language learning process easier and more enjoyable. It is therefore a factor that can and should be utilized.

(1) See: L. Bernstein, op. cit., p.424.

Cook concluded his chapter about "Helping the Under-fives with Language", with the statement that: "the most important thing for language development is an adult with a genuine interest in the child and in what the child has to say."⁽¹⁾ Similarly, the present study can be concluded by pointing out in a brief way that second language learning to be effectively developed and positively accelerated requires in essence an L₂ teacher with a genuine interest in the L₂ learner and in what this latter has to communicate via the L₂ to the former whether in speech or in writing. These are perhaps the most necessary prerequisites for successful second language teaching which may not be fruitful ultimately in the absence of the most effective and essential of all educational forces - an able, patient, and caring teacher, whom Halliday has called "a midwife in the creation process of the social man".⁽²⁾

(1) V. J. Cook, Young Children and Language (Edward Arnold Ltd., 1979) p. 68.

(2) M. A. K. Halliday, op. cit., p. 9.

APPENDIXLanguage Learning Questionnaire
Probing the Strategies of L₂ Learners
in a Free-Learning Situation

To elicit information from adult L₂ learners in a free-learning situation about their language learning strategies, the following questionnaire was constructed. The questionnaire was administered with the purpose of comparing the extent of the learners' exposure to the second language and the relatively higher proficiency in the use of the second language than that usually noticeable with adult L₂ learners in a formal situation.

METHODSubjects

The participants in the study were male and female volunteer University students and teachers of different nationalities. The subjects were asked to rate only those activities that they had personally experienced in their learning by 'total immersion'.

Procedure

The 42 questions in the questionnaire focused on four clear concepts: cognitive, affective, cultural and environmental. The affective and environmental were of special interest in the present context. A number of questions focused on various aspects of the cognitive strategies, and in each case the respondents rated the degree to which that

particular aspect of learning worked out successfully to the interaction that took place between those strategies and the affective variable and the environmental/cultural factor. The items included reference to (a) the native language, (b) transfer of training, (c) the learner's approach to the material (errors), (d) the learner's approach to communicating with native speakers, (e) over-generalization of the L₂ rules.

DATA ANALYSIS

Results and discussion

It has been found that there is a positive correlation between proficiency and automatization on the one hand, and proficiency and the desire to communicate with native speakers on the other hand. Thus, the relatively higher proficiency in the language may be the direct result of the interaction between the external environmental factor that gives excessive exposure to L₂, both in qualitative and quantitative terms without high structural expectations and the internal affective/cognitive factors which positively interact with the external variable through a keen interest in communication on the part of the L₂ learner and an uninhibited type of personality which gives the advantage of "linguistic tolerance", i.e. acceptance of criticism and correction of mistakes on the part of the L₂ adult learner. The individual differences noticeable can be explained by a number of factors; neuro-affective, cultural, environmental and cognitive.

The general conclusions reached as a consequence of the questionnaire and of the study as a whole are:

(i) That automatization and mastery of rule system should go hand in hand, with a slight tip of the scale in favour of communication and automatization, especially at the early stages of learning for those learners who are communicatively-oriented. Since L_2 learners exhibit variation in their learning processes, the opposite procedure is advised for those who are cognitively-oriented. It is important as a starting point to provide special forms of language routines that can meet the different aspects of the learners' variation of linguistic behaviour from the cognitive, affective and communicative points of view. The suggestions laid down in chapter five, "pedagogical implications" can help as guidelines for second language teachers. The eradication of errors can take place gradually, once a satisfactory degree of linguistic achievement at those three levels (cognitive, affective, and communicative) has been established.

(ii) A specific conscious explanation of errors can be made clear to the adult L_2 learners who are cognitively-oriented in particular.

(iii) The specific process of correction for the three types of learner should be a psychologically appropriate one, so that it prevents inhibition and helps make an accurate diagnosis of student difficulties.

Questionnaire distributed among
a number of second language learners
who learned their L₂ in a
free-learning situation

- . What is your first language (L₁), and what is your second language (L₂)?
- . Did you have any previous knowledge of the second language before visiting the country in which L₂ was spoken?
3. Do you rate yourself: average, below average, or over average in your ability to learn foreign languages? State why.
4. Was your interest in learning the L₂ confined to communicating orally with native speakers, or did you also have any other interests in learning to read and write it?
5. Do you consider yourself to be fluent in speaking the foreign language? (If not, or yes, what do you think the reasons are?) Give reasons for your opinion.
6. What kind of activities do you think could help you learn the second language best? Taking part in debates, watching films, reading books?
7. Did you simplify your L₂ in an effort to communicate?
8. Was your general pattern of learning the second language based on a conscious learning of the grammatical rules or on a 'strategy of guessing' as an alternative?

9. Which was more important for you: (a) to communicate your ideas fluently regardless of the grammatical errors you made, or (b) to express yourself with grammatical accuracy, i.e. with conscious attention paid to your grammatical construction at the expense of your fluency?
10. What did you do when you said something that was not well understood by your listener?
11. When did you feel the need to correct your grammatical mistakes; was it when communication was prevented?
12. What did you do to fill in the gap in your lack of knowledge of certain grammatical rules?
13. In the process of correcting your errors, did you depend on your intuition or on other people?
14. Did you like having the grammatical rules clearly stated, or did you prefer to discover them slowly on your own?
15. Was it easy or hard for you to detect your own errors?
16. When your errors were corrected for you, did you know why you made those errors?
17. Do you attribute the cause of the errors you made to (a) an incomplete learning of the rules, i.e. uncertainty about their use, or (b) to a negative transfer from your first language (L_1)?
18. Do you think that if you had taken your time, you would have helped yourself to eliminate some errors that were due to carelessness?
19. After knowing the rules, did you still make mistakes in using them because they had not been drilled enough?

20. Did you prefer that native speakers overlook your mistakes, or correct them for you?
21. Did you try to keep a record of your errors with the intention of reviewing them after they had been corrected?
22. How did you react when you made mistakes which made native speakers laugh? Were you inhibited a bit, or did you let it pass unnoticed? How seriously or lightly did you take it?
23. Did you sometimes overgeneralize a certain grammatical rule?
24. Did you resort to a sort of avoidance strategy when in difficulty about tense switching or about any other particular element that was complicated for you?
25. What specific difficulties did you encounter, and how could you go about solving them?
26. Did you think of another way of saying something if you did not know the grammatical construction?
27. Did you sometimes depend on your first language (L_1) to help you communicate with the native speakers of the second language?
28. Do you think that your first language could help you learn the second, or do you believe that, on the contrary, it negatively interfered with the learning of your L_2 ? Specify in what way it was a help and in what way it was a hindrance.
29. Did you resort to translating your ideas into your L_1 before you could understand them in L_2 ?

30. Did you associate with native speakers and use L_2 for most of your activities, or did you prefer to stick to your own native friends and use your L_1 instead?
31. Did you feel comfortable engaging in conversations with native speakers? Was it preferable for you to restrict the type of conversation to certain limited topics, or to extend it to a wide range of topics? Did the number of native speakers present affect your willingness to speak (the larger it was the less willing you became)?
32. Was using the second language more interesting for you than the use of your L_1 ? What did you like or dislike about your L_2 ?
33. Did you try for a long time to understand difficult concepts, or did you give up easily when confronted with confusing grammatical elements that you could not figure out easily?
34. In a conversational setting with native speakers, did you feel bad if you could not contribute at all? If so, did you give up attempting to understand the conversation of those around you?
35. Do you think that you did not frequently use exactly the words you wanted that were appropriate for a given situation? When you felt conscious about this, what did you do to help your message get through and be well understood?
36. Did you make associations to help you remember words?

37. How did you manage when you did not remember the exact word you needed?
38. Did you make an effort to learn new vocabulary, or did you get bored learning them?
39. Did you fully understand the sense of humour, the jokes and all the subtleties of the messages you received from the native speakers?
40. When using the second language yourself, do you think that the L_2 words you used in conversing with native speakers of your L_2 language were capable of expressing all the subtleties of the message you wanted to convey, if not, why not?
41. Having learned a second language, do you think it is more easy or more difficult for you to learn a third, and why?
42. In what ways do you think your learning of L_2 differs from the way you learned your L_1 ?

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