

A CRITICAL ASSESSMENT OF BEHAVIOURISM IN THE LIGHT OF RECENT THEORIES OF LANGUAGE ACQUISITION.

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Learning theories range from the rigidity of operant conditioning to the Platonistic view that, for the individual, learning is largely a matter of drawing out what is innate in the mind. This is the view Humboldt expressed in the nineteenth century and which is summarized by Chomsky in the following terms:

Applying a rationalist view to the special case of language learning, Humboldt (1836) concludes that one cannot really teach language but can only present the conditions under which it will develop spontaneously in the mind in its own way. (1)

Two very important points to notice here are that this development is spontaneous and 'in its own way', that is in ways which cannot be predicted or controlled.

The opposite was sustained by behaviourist psychologists who viewed language acquisition as a process of habit formation through imitation and selective reinforcement. According to Skinner, one of the best-known exponents of behaviourism, verbal behaviour could be predicted and controlled by observing and manipulating the physical environment of the speaker and likewise verbal learning would take place in a smooth and predictable way if we controlled the stimuli in the physical environment of the learner. Skinner believes that learning processes are fundamentally the same in animals and in men and has consequently developed his learning theory on the basis of the results obtained in his studies of animal learning under laboratory conditions. It is not difficult to see how erroneous it is to consider that men, possessing such a rich and complex inner mental structure, would process input information in the way lower animals do. Laboratory findings could be applied to complex human behaviour only in the most gross and superficial way.

However, behaviourists limited themselves to the observable external factors determining a change in behaviour and avoided the more intriguing, though difficult, issue of the role played by the internal structure of the organism in the learning process.

Language is a form of human behaviour and it should, therefore, be explained in the same terms appropriate to human behaviour as a whole. With this behaviourist

(1) This is Chomsky's interpretation of Humboldt's view of language learning, in Allen and Van Buren (1971), pp. 134-135.

principle in mind Skinner developed a very neat account of verbal behaviour and verbal learning in terms of stimulus-response associations and this has strongly influenced foreign language teaching practices during the last 20 years. His learning model, known as instrumental or operant conditioning, establishes a direct link between stimulus (S) and response (R) followed by reinforcement as a vital aspect in the setting up of patterns of behaviour. Nothing is said about the role of the physical condition and complexity or level of development of the organism in behaviour.

The view that verbal behaviour does not differ in any significant way from non-verbal behaviour has been rejected by many psychologists and linguists. It is precisely language, characteristically human, that makes human learning very different from that of other animals. E. Stones (1966) summarizes this view in the following passage :

Possession of language is probably the most important distinguishing feature between man and other animals, for, as can be readily seen, the ability to reproduce the world symbolically, emancipates man from his immediate temporal and spatial environment and introduces stimuli not only from the here and now, but from a distance and from past and future. This in itself is enough to extend the human stimulus field unimaginably. If we also consider the abstracting and synthesizing properties of language another dimension is added. (p. 102)

On top of the conditioning processes, basically similar in man and other animals, man builds a complex superstructure based on the symbolic properties of language which is the most important aspect of human learning.

Skinner (1948) has said that to look for meanings or ideas in verbal behaviour is only misleading and mentalistic, because 'the speaker is merely the locus of verbal behaviour, not a cause' (p. 95) and the meanings are only to be found in the stimulating, observable environment. This view has been challenged by psychologists who hold that between the stimulus and the response comes the organism with all the complexity of a highly developed central nervous system. They represent the pattern of learning as S-O-R where O symbolizes the organism which analyses, collates and processes the stimulus inputs (S) from the external and internal environment before a response (R) is made. These mediating processes in the organism cause individuals to react in different ways because they act as self-stimuli thus making verbal behaviour quite unpredictable and the direct relationship between stimulus and response useless and empty.

These two distinct schools of thought on the nature of language and language learning have given rise to different methods of foreign language teaching. The structural approach underlying most of them is based on the Skinnerian theory which allows no place for mediational and emotional processes and accounts for only the physical manifestations of language.

This tradition, represented among others by N. Brooks and R. Lado, would define language learning as a process which involves the establishment of neural and muscular habits that must be learned until they function automatically. Learning implies

a change in performance which can only be achieved by providing opportunities for practising the language. But because their concept of language is based on structuralism and behaviourism they completely ignore meaning, minimize the role of understanding and emphasize the development of automatic responses, which could hardly be called practice of language. Furthermore, as W. Rivers (1969) points out:

Attention is devoted primarily to the processes which theoretically should produce the most effective foreign-language habits and only secondarily to the individual, who is reacting in his own way to the teaching methods and who therefore provides the factor in the situation which will ultimately determine whether the language is learned or not. (p. 30)

The notion that teaching a language is to impart a new system of complex habits led to the development of numerous mechanical and meaningless drills such as choral and individual repetition, memorization of dialogues, and pattern practice. Learning language formulae, dialogues, and short prose paragraphs by heart and reciting them in the classroom took the place of real communication. These are the techniques employed in audio-lingual courses, which apply behaviourist principles, and against which Rivers (1968) argues in the following terms:

Students trained audiolingually, in a mechanical way, can progress like well-trained parrots: able to repeat whole utterances perfectly when given a certain stimulus but uncertain of the meaning of what they are saying and unable to use perfectly memorized materials in contexts other than that in which they have learned them. (p. 46)

Freedom to communicate personal meanings, to use expressive language creatively and imaginatively, to experiment with language, is absolutely denied to the learners. They are supposed to repeat and learn the chunks of seemingly natural language, which have in fact been "edited" for pedagogical purposes, provided for them by either the textbook or the teacher, without making any significant modifications. This is a result of the need to avoid mistakes at all costs so that the learner does not have incorrect responses reinforced. Teaching which encourages the learner to select language to express his own meanings is thought to hinder the instinctive production of language so all the responses are given or partly given to him. This ignores two important factors: the individual's desire to understand what he is doing and the stimulating need to communicate personal ideas.

The behaviourist model for language teaching with its emphasis on the accumulation of a repertory of language behaviour bit by bit by means of structural drill can no longer be accepted. It has been proved that material is better retained and for longer periods when it is learned with understanding and new problems are then solved with much greater facility; that the organizational processes mediating between stimulus and response determine the nature of the response; and that meaning is found in the total pattern of a situation.

This revised view of learning will naturally lead us to ascribe to

a semantic approach (2) in foreign language teaching where the emphasis will be given to whole configurations of meaning, to a unity of purpose and content in language which will make language learning a relevant, meaningful, conscious and enjoyable activity.

Language teachers have always realized the importance of providing meaningful contexts for language learning, but this was made difficult because of the restrictions imposed by the grammatical syllabus. We can hopefully assume that this era has come to an end and begin on the task of devising new ways of selecting our teaching materials.

It is not easy to attempt to change ideas and beliefs that have been rooted in language teachers' and in textbook writers' minds for so long. The importance of structural drill, of contrastive analysis to overcome mother tongue interference, of presenting teaching material according to strict rules of selection and gradation are principles that have been observed and applied with little discussion. The role of the learner has been minimized except as a possible generator of mistakes because of the excessive preoccupation with the contribution of the teacher, with structural descriptions of the language, with trying to develop a theory of language acquisition based on these descriptions, with trying to pinpoint the factors involved in learning a foreign language, etc. It would appear, though, that the necessary and sufficient conditions for a human being to learn a foreign language are already known: a normal human being will learn a foreign language if this is presented to him coherently and naturally and if we encourage him to use it imaginatively and creatively for the purposes of meaningful communication.

It is not difficult to notice an overt reaction against behaviourism in foreign language teaching, largely brought about by the results of some recent theories of language acquisition.

During the last 30 or 35 years the possibility of a similarity between the processes involved in learning an L₂ and those involved in learning the mother tongue has been denied, but recent psycholinguistic investigations which propose the existence of a universal inborn capacity which allows us to acquire a language as a normal maturational process have led to a consideration of the possibility that, if this is so, this innate language acquisition device could also affect the successful acquisition of a second language.

Earlier psychological approaches to the language learning process had concentrated on studies of phonological and lexical items and had given vital importance to environmental factors, mainly to parents, as providers of models for imitation and reinforcement. The role played by the child as an active learner was overlooked and there was no serious attempt to account for the acquisition of the structural complexities characteristic of the language system. Recent approaches, on the other hand, give major importance to

(2). For a further discussion of the semantic approach in foreign language teaching see:

Hill, L.A. (1971). 'From Syntax to Semantics'. *E.L.T. Journal*, Vol. XXV, No. 3, pp. 229-238.

Silva, Carmen. (1974). 'Semantics in Foreign Language Teaching'. *The English Language Journal, Argentina*, September 1974.

the active part played by the child and are much more interested in finding an explanation to the child's ability to acquire so successfully and in a relatively short period of time the grammar of his language.

The view of language acquisition in terms of maturation of an innate language capacity underlies most current studies in this field, some of them strongly influenced by Chomsky's theories about deep and surface structure in language.

Chomsky (1972 b) has attempted to explain the nature of this internal predisposition that allows us to develop a knowledge of our language as a kind of theory construction. The child discovers the underlying ideal theory of his language from the usually distorted data that he obtains from the linguistic performance of his social environment. This is an extraordinary fact. Furthermore, the acquisition of this knowledge is relatively independent of intellectual capacity and is done without explicit instruction.

The view of the child as a scientist in his own way unconsciously formulating and testing hypotheses about the structure of the language was taken up by Mc Neill, spurred by the fact that children acquire the grammatical system of their mother tongue in slightly more than two years. He presents (3) the case that early speech is not an abbreviated and distorted form of adult language but the product of a unique first grammar created by a language acquisition device (LAD). A young child is a fluent speaker of an exotic language which from a very early stage shows nonrandom combinations of words that reflect the child's early grammar. The words children use at this early stage of 'telegraphic speech' (18-24 months) fall into two categories: pivot class and open class, which the child combines according to his own rules and not as a direct imitation of adult speech. Mc Neill's hypothesis is that the first stages of linguistic development are guided by a universal hierarchy of categories which represents linguistic universals. These linguistic universals are part of the child's genetic endowment and direct his discovery of the grammar of his language exemplified in adult speech. From this model he can infer the appropriate grammatical classes and all the relevant features of the language because he knows in advance the range of possible distinctions.

As a result of longitudinal studies of the development of English syntax in children between 18 and 36 months of age, Brown and Bellugi (4) also came to the conclusion that the role of the child as an active learner was of vital importance. The processes observed during these studies showed that children almost never repeat the adult sentence as it is presented and that utterances which involve mistakes are an external sign of the children's searching, of course quite unconsciously, for the regularities of English syntax.

Systematic mistakes found in the language of young children are given as evidence of the fact that children formulate hypotheses about the structure of the language which undergo successive modifications until the complete grammar of the adult language is

(3). in Mc Neill, D. (1968).

(4). in Brown, R. and Bellugi, U. (1972).

acquired. These mistakes seem to be necessary for them to find out the limits to the area of application of the rules that they are formulating. Perhaps the best-known example of such mistakes is the over-regularization of the rule for past-tense inflection in English. It has been observed that children first learn the correct grammatical form of the past tense of some irregular strong verbs of frequent occurrence in adult language, such as 'came', 'went', 'took', 'sat', but in their later speech they systematically produce the wrong grammatical forms 'comed', 'goed', 'taked', 'sitted', which evidently show the extension of the rule for forming the past tense of weak verbs.

These recent studies of language acquisition have led an important group of foreign language teaching experts (5) to consider that an internalized grammar of a foreign language could be developed in much the same way as that of the native language if we assumed the existence of innate language learning strategies.

The value of several of the now traditional behaviouristic practices has been questioned in the light of these mentalistic (6) accounts of language acquisition. Principles such as the rigid selection and gradation of vocabulary and syntactic structures according to frequency, usefulness, basicness or productiveness; the strict avoidance of errors; endless imitation, repetition and practice have been shattered and declared superfluous. Jakobovits (1971) suggests that at least three conclusions can be taken from these new studies :

First that the learner should be exposed to the full range of linguistic data right from the beginning so as to give him maximum opportunity to test out his inferences about the underlying structure of the language. Second, he should be encouraged to produce any sentence, even if 'incorrect', to enable him to practice phonological surface transformations of base strings; 'correction' of such semisentences by the teacher is helpful only when they represent 'expansions', as discussed ... in connection with language acquisition. Third, drills and exercises are of dubious utility unless they represent attempts to communicate freely (as opposed to practicing a grammatical rule artificially). (pp. 25-26)

Many deny the possibility that an adult can learn a foreign language in the same way a child learns his L₁ and therefore emphasize the difference and purposely produce teaching materials which make him a different kind of learner from the child. Newmark and Reibel (1968) have presented some of these assumptions and opposed to them their own points of view :

1. That the child's brain is different from the adult's because the adult has lost the neurological ability and flexibility to infer general linguistic laws from particular instances.

(5). Among others, L. Jakobovits, R. Hadlich, L. Newmark, and D. A. Reibel.

(6). 'Mentalistic' is used in the sense Wilkins (1972 a) gives to this term: It is their willingness to admit the possible existence of unobservable, internal mechanisms that leads these linguists to be considered mentalistic. (p. 169)

Newmark and Reibel's contention is that the neurophysiological evidence may be used to argue that adults are quantitatively inferior to children as language learners, but that it cannot be used to argue that they are qualitatively different kinds of learners. They believe that the same language learning capability exists in both child and adult, quite possibly in different degrees, and that the extraordinary efficiency of the method by which children learn can and should be taken advantage of in teaching adults.

2. That the child has much more time to learn the language. Newmark and Reibel's argument is that it is difficult to say whether this is true. That in any case, children up to the age of four are not exclusively concerned with learning their L₁, but with many other activities and if we compared the situation of the four year old with that of the college student after 2 or 3 years of language courses we might be surprised at finding that the time factor was not so different. Furthermore, there is the question of concentration of attention in favour of the adult.
3. The child is much more strongly motivated to learning his native tongue. In this case, Newmark and Reibel tend to concur, but while acknowledging the general truth of this, I would want to contend that most human motives are learned and that we can aim at developing in the student the desire to learn the foreign language if we make it meaningful and relevant to him.
4. The child offers a tabula rasa for language learning, whereas the adult learning a foreign language will have to overcome the difficulties posed by interference. Newmark and Reibel contend that interference difficulties should be minimized and that the problem elements of the foreign language should be presented as part of a whole system and in relation to other elements in it rather than in relation to elements of a different system.

Newmark and Reibel conclude that it is possible to assume a capability in the adult language learner that will enable him:

To acquire the general use of a foreign language by observation and exercise of particular instances of the language in use... 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 capability of the student will gradually take care of the rest. (p. 161)

No large-scale research project has been devised to prove the truth of the statements discussed in this article, but the results obtained by several people investigating in the language teaching field at least appear to offer encouragingly positive evidence:

At Loyola University in Chicago the teaching of four foreign languages was organized along the same lines of counselling techniques and adapted to the personal and language problems met with in learning a foreign language. We are not concerned with the details of the experiment, which was considered to be very successful, but with one of the conclusions reported by Titone (1973) as follows:

Another result was an increased awareness that language is really 'persons'. That is, the focus shifted from grammar and sentence formation to a deepening sense of personal communication. (p. 115)

Further evidence is offered by a revolutionary language teaching programme initiated in 1964 at the University of California in San Diego, which was based on Newmark's theories. Newmark (1971) reports that after sixty weeks 98% of the students who had started the study of a foreign language under this special programme had achieved all the intended goals:

Including the ability to hold conversations in the language easily on random topics and to read ordinary written material with rapid comprehension. (pp. 16-17)

It is interesting to notice that the programme has achieved highly positive results without having to conform to received ideas about language teaching such as that a structurally disorganized course would be incapable of forming native-like linguistic abilities. This claim has been proved wrong: these adult students did learn to use the language with near-native ability by being exposed to instances of language in use, by being allowed to follow their own spontaneous interests and by being encouraged to say what they wanted and when they wanted to say it. It is clear that we have gone a long way since the day Lado (1964) said that because learning was the crucial outcome we should 'teach primarily to produce learning rather than to please or entertain.... In a scientific approach the amount of learning outweighs interest'. (p. 56)

BIBLIOGRAPHY

- Allen, J.P.B. and Van Buren, P., editors (1971). Chomsky: Selected Readings. London: Oxford University Press.
- Bellugi, U. and Brown, R., editors (1964). The Acquisition of Language. Monographs of the Society for Research in Child Development, Vol. 29, No. 1, Purdue University.
- Brown, R. and Bellugi, U. (1972). 'Three Processes in the Child's Acquisition of Syntax'. In: Open University (1972).
- Brooks, N. (1964). Language and Language Learning. New York: Harcourt Brace.
- Chomsky, N. (1972 a). Language and Mind. Enlarged edition. New York: Harcourt, Brace Jovanovich, Inc.
- Chomsky, N. (1972 b). 'Language and the Mind'. In: Open University (1972).
- Hill, L.A. (1971). 'From Syntax to Semantics'. E.L.T. Journal, Vol. XXV, No. 3, pp. 229-238.
- Jakobovits, L. (1971). Foreign Language Learning: A Psycholinguistic Analysis of the Issues. Massachusetts: Newbury House Publishers.
- Lado, R. (1964). Language Teaching: A Scientific Approach. U.S.A.: Mc Graw-Hill, Inc.
- Mc Neill, D. (1968). 'Developmental Psycholinguistics'. In: Smith, F. and Miller, C. (1968), pp. 15-84.

- Newmark, L.D. (1971). 'A Minimal Language - Teaching Program'. In: Pimsleur, P. and Quinn, T. (1971), pp. 11 - 18
- Newmark, L. and Reibel, D.A. (1968). 'Necessity and Sufficiency in Language Learning'. *IRAL*, Vol. VI, N^o.2, pp. 145 - 161.
- Oller, J.W. and Obrecht, D.H. (1968). 'Pattern Drill and Communicative Activity'. *IRAL*, Vol VI, N^o.2, pp. 165 - 174.
- Open University: Language and Learning Course Team. (1972) *Language in Education*. London: Routledge & Kegan Paul.
- Pimsleur, P. and Quinn, T., editors (1971). *The Psychology of Second Language Learning*. Cambridge: Cambridge University Press.
- Rivers, W. (1968). *Teaching Foreign Language Skills*. Chicago: The University of Chicago Press.
- Rivers, W. (1969). *The Psychologist and the Foreign Language Teacher*. Chicago: The University of Chicago Press.
- Silva, Carmen. (1974) 'Semantics in Foreign Language Teaching'. *The English Language Journal*, Argentina, September, 1974.
- Skinner, B.F. (1948). *Verbal Behaviour*. 'William James Lectures', Cambridge, Mass. Harvard University Press.
- Smith, F. and Miller, G., editors (1968) *The Genesis of Language*. Massachusetts: MIT Press.
- Stones, E. (1966). *Educational Psychology*. London: Methuen & Co. Ltd.
- Titone, R. (1973). 'Some Factors Underlying Second-Language Learning'. *E.L.T. Journal*, Vol. XXVII, N^o.2, pp. 110 - 120.
- Widdowson, H.G. (1972). 'The Teaching of English as Communication'. *E.L.T. Journal*, Vol XXVII, N^o.1, pp. 15 - 19.
- Wilkins, D.A. (1972 a). *Linguistics in Language Teaching*. London: Edward Arnold.
- Wilkins, D.A. (1972 b). 'Grammatical, Situational and Notional Syllabuses'. Unpublished paper presented to the Third International Congress of Applied Linguistics, Copenhagen.