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THE SECOND LANGUAGE LEARNER AND PRONUNCIATION

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ABSTRACT

The present study investigates the question of differences in accuracy of pronunciation among students of English as a second language. This theme is considered in the context of second language learning in general. The investigation consists of a bibliographical study of a model of second language learning and of various theoretical and experimental studies of factors which influence pronunciation learning. The study of these sources indicates that:

1. Any learner with normal physiological equipment will have an innate ability to learn to pronounce a second language.
2. This ability is likely to be modified by individual learner variables such as age, cognitive style, language learning experience, attitudes, motivation, innate aptitude for oral mimicry, personality and so on.
3. The acquisition of intelligible pronunciation requires an exposure to the spoken language which is varied enough for the input of adequate information about the phonological and phonetic features of the target language. Such information is required for the efficient operation of those processes common to all second language, including pronunciation, learning.
4. Pronunciation learning of a second language is facilitated if students are trained in formal and functional practising during exposure to the target language, in formal practising and inferencing for the processing of the information gained,

and in monitoring and inferencing for the formation of language responses.

5. The objective of native-like pronunciation is accessible to those learners who make an 'empathic' identification with the target culture, utilizing the learning strategies to acquire those features which distinguish the pronunciation of the dialect which has been selected as a model.

6. Some learners of English as a second language will have more accurate pronunciation than others because their individual learner characteristics have disposed them to make greater use of the learning strategies.

RESUMO

O presente estudo investiga a problemática das diferenças de precisão da pronúncia em estudantes que estudam inglês como segunda língua. Este tema foi considerado no contexto geral da aprendizagem de uma segunda língua. A pesquisa abrange um estudo bibliográfico de um modelo de aprendizagem de uma segunda língua e vários estudos teóricos e experimentais de fatores que influem na aprendizagem da pronúncia. O estudo das fontes citadas indica que:

1. Todo o aprendizando em condições fisiológicas normais tem a habilidade inata de aprender a pronúncia de uma segunda língua ;
2. esta habilidade poderá sofrer modificações por variáveis individuais do aprendizando tais como idade, estilo cognitivo, experiência de aprendizagem de língua, atitudes, motivação, aptidão inata de expressão oral, personalidade e outras.
3. A aquisição de uma pronúncia inteligível requer contacto com a língua que contém as variedades suficientes para a aquisição de informações adequadas sobre os aspectos fonológicos e fonéticos da língua em questão. Tais informações são exigidas para a eficiente operação de tais processos comuns a toda a aprendizagem da segunda língua, incluindo a pronúncia.
4. A aprendizagem da pronúncia é facilitada se os estudantes são treinados na prática formal e funcional durante o contacto com a língua enfocada; em prática formal e inferência para

o processamento da informação obtida, bem como em controlar e inferir para a formação de respostas linguísticas.

5. O objetivo de uma pronúncia similar à do nativo é acessível àqueles aprendizados que realizam uma identificação com a cultura em questão, utilizando as estratégias de aprendizagem para adquirir aqueles aspectos que distinguem a pronúncia do dialeto que foi selecionado como modelo.

6. Alguns aprendizados de inglês, como segunda língua, tem uma pronúncia mais acurada do que outros porque suas características individuais de aprendizando o dispuseram a fazer maior uso das estratégias de aprendizagem.

INTRODUCTION

THE THEME AND ITS IMPORTANCE

'The second language learner and pronunciation'.

A constantly recurring observation about pronunciation learning is that despite similar formal training, second language learners vary greatly in their ability to pronounce the second language. Teachers of English as a second language need to be able to account for this phenomenon.

An investigation of the differences in achievement between individuals when pronouncing a second language has both inherent and practical interest. The inherent interest is in determining which of the possible factors are most significant in accounting for these differences. The practical value of such a study is in the insights that it provides: these may be applicable in the classroom to improve performance in pronunciation learning.

By means of a bibliographical study, the present paper explores this question, suggesting possible applications of the insights gained. The fact that skill in pronunciation is acquired simultaneously with other aspects of a second language such as listening comprehension, grammar and morphology makes it essential that pronunciation be considered in the context of second language learning in general. For this reason, the model of second language learning developed by Ellen Bailystok

will provide a theoretical basis for the present study.

The research problem derives from an observation which is consistently evident regarding second language learning: it is always the case that some individuals are more successful than others in mastering the language, even though their formal language learning experiences have been similar. Bailystok formulates that observation as a question: Why does language learning proceed at different rates for different individuals? This question prompted the present research problem.

While Bailystok's model is intended to account for different rates of language learning, the research question adds the dimension of accuracy of performance in pronunciation. That is, the question recognizes that at least where pronunciation is concerned, it is not only necessary to account for relative rates of learning but also to investigate the reasons for qualitative differences in learners' pronunciation.

2.1 THE PROBLEM

The research problem central to this bibliographical study is formulated in the following question:

Why do some learners of English as a second language have more accurate pronunciation than others, even though their formal language experiences are similar?

2.2 IMPLICATIONS OF THE RESEARCH PROBLEM

Various areas of investigation are suggested by the research problem. Those which will be pursued in the present study are the following:

- a) a criterion of accuracy which is relevant for students of English in countries where English is not spoken natively.

b) the processes and factors involved in pronunciation learning.

c) those individual differences which may account for variations in ability to pronounce a second language.

d) given an exposition of those factors suggested by the literature to be relevant to pronunciation learning, implications can be made concerning pronunciation teaching. A rationale for teaching pronunciation will be outlined.

2.3 OBJECTIVES.

a) To provide a perspective for the problem of pronunciation learning by describing the theoretical model of second language learning developed by Ellen Bailystok.

b) To present a synthesis of various theoretical and experimental studies of factors which may account for differences in achievement when learning to pronounce a second language.

c) To provide a rationale for the teaching of pronunciation to teenage and adult learners which takes into account the nature of pronunciation learning and of those factors which influence such learning.

3. METHODOLOGY.

A survey was made of the literature relevant to the learning of the pronunciation of a second language. Taking the model developed by Bailystok as a basis, the research question was formulated as a point of reference in the discussion of various other theoretical and experimental studies of the factors involved in successful pronunciation learning.

The first step in the investigation is to discuss a criterion of pronunciation accuracy. Then in the first section

of the main discussion (5.1), a theoretical model of language learning is described, with particular attention to the role of learning strategies. In section 5.2 these are compared with the learning techniques which Joan Rubin has attributed to good language learners.

Next, the relative importance of formal and informal language exposure for pronunciation accuracy is discussed in section 5.3. Section 5.4 illustrates how the processes and strategies of Bailystok's model might be expected to operate for students who are living in their native culture and learning English as a second language.

Section 5.5 is concerned with those individual differences which may influence the efficiency of the processes and the use of the strategies for pronunciation learning. Section 5.6 describes a study of twenty variables suspected of displaying a significant relationship to pronunciation accuracy. The role of motivation and attitudes is considered in section 5.7.

In section 5.8 the main conclusions of the discussion, together with recommendations of several authors on the conditions necessary for successful pronunciation learning, provide a rationale for the teaching of pronunciation .

4.

CRITERIA OF ACCURACY.

A primary consideration in the discussion of factors affecting pronunciation accuracy is to establish a criterion of accuracy. R.E.B. Atkinson^I has suggested that when teaching English pronunciation, the criterion for the teacher should be 'Does the student sound like a native speaker of English?' and not 'Has he conformed to my own rendering of this sound?' This criterion will be accepted as a basis for the present investigation. Two other criteria of accuracy of pronunciation will be referred to here and discussed later in the paper. They will be shown to be consistent with the basic criterion.

'Native-like pronunciation' is a very general, yet practical criterion of accuracy. Both linguists and laymen, even people with no linguistic training whatever, often observe that some speakers of a second language have a 'very thick' or 'very heavy' accent, while others have 'almost no accent', and so forth. These observations would seem to involve largely subjective impressions of fluency, consistency and intelligibility, while some observers may give more attention to other features of the speaker's pronunciation. So, the criterion of 'native-likeness' is necessarily general. But it is also practical because it recognizes that the learner will be influenced by various accents, including those of teachers. Each of these influences will be reflected in the learner's own approximation to a native-like accent.²

An immediate question about this criterion of accuracy is 'Which features of native-like pronunciation does the learner need to acquire?' Obviously, most learners of English in countries where it is not the native language have little opportunity or need to acquire the fine nuances which distinguish the accents of native speech communities. But whenever a second language, such as English, is used in practical situations it must be intelligible. To ensure intelligibility, the learner needs to control certain aspects of English pronunciation which are common to the language wherever it is spoken. The following features are important for intelligibility because they contribute to the verbal patterns which correspond to the oral expectancies (and thus, requirements) of native listeners. Secondly, these features can be acquired by the learner.

i) Stress : learners whose native language is syllable-timed, as is Portuguese, need to adapt to the stress-timed rhythm of English. Whereas in languages spoken with a syllable-timed rhythm the syllables tend to be equal in length, there is considerable variation in syllable length with stress-timed rhythm.

ii) Linked to variations in syllable length are vowel reduction, elision of final and initial consonants at some word boundaries and variations in word stress.

iii) Continuity: the incidence of pauses in the stream of speech, where they come, how frequent they are and how long they are, is highly idiosyncratic and bears little relation to syntax. But the frequency, position and length of pauses contribute to the intelligibility and native-like quality of speech.

iv) Intonation: learners need to practise those variations

in intonation which carry important differences in meaning for native speakers.³

Of these features, stress combined with intonation carry patterns of meaning within the sentence and so are particularly important in pronunciation learning.

Beyond the overall criterion of native-like accuracy, it has been pointed out that there are many acceptable pronunciations in English and that a non-native speaker would have to know more than a minimum amount about English to know if his pronunciation falls within this range of acceptability. Bailey⁴ has suggested that the proper target of pronunciation learning should be to know the principle styles of English speech and which pronunciations are tolerated in which styles. Further reference will be made to Bailey's views on pronunciation learning in the final section of this paper.

Pronunciation, as a distinct language skill, occurs in the many forms of speech, including reading aloud. Within these forms there is a range from more spontaneous to more deliberate and controlled pronunciation. Individual characteristics of pronunciation are more evident in spontaneous conversation. In formal speaking situations the pronunciation style is deliberately adjusted to the register being used. When reading aloud an appropriate style will be used by the reader to suit the subject matter and the audience. Pronunciation, then, is closely linked to verbal fluency. In informal conversation the objective for second-language learners should be native-like fluency and spontaneity. In more formal speaking and reading aloud the learner's objective should be a more articulate pronunciation coupled with a measured fluency.

5.I.

THE LANGUAGE LEARNING MODEL.

The model of second language learning which will be described below was developed by Ellen Bailystok of the Ontario Institute for Studies in Education, to represent the processes and factors involved in second language learning. It proposes to account for differences in achievement between individuals as well as differences in skill development for particular individuals. This second purpose, differential skill development for individual learners, is beyond the scope of the present paper and will not be pursued.

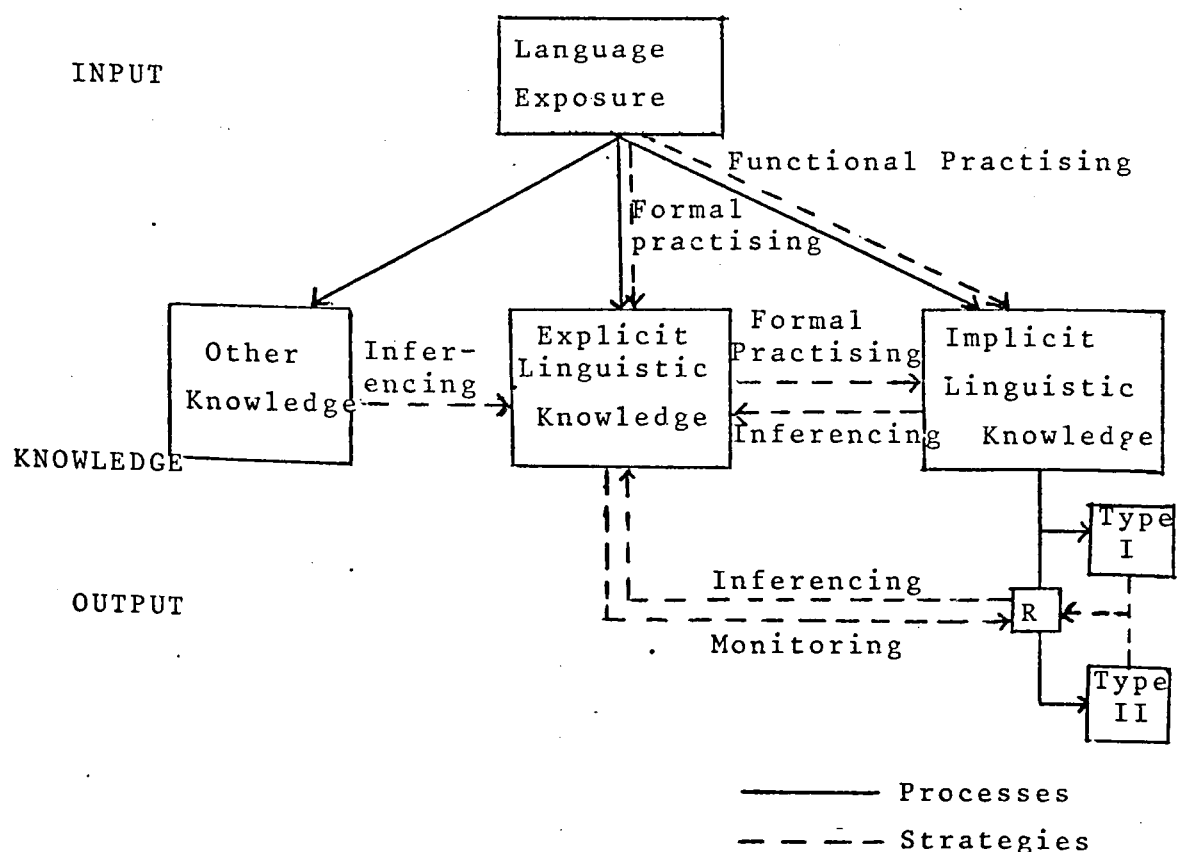


Figure I. Model of Second Language Learning.⁵

Ervin-Tripp (1970) notes that 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.⁶ Bailystok's model incorporates factors suggested by the literature to have relevance for second language learning; it postulates processes, describing the nature of the effect of these factors and the interactions between them. The model does not describe differences between language learners. It describes the way in which humans, given biological, social and other restrictions, learn a second language.

Differences in achievement between individuals are attributed to differences in the efficiency with which the model operates for different people. An understanding of what factors determine that efficiency motivates research generated from the model. Experimental and theoretical studies of such factors will be discussed with reference to the model in the following sections of this paper.

ORGANIZATION AND CONTENT.

The model presented in Figure I, is organized on three levels - Input, Knowledge, Output. The language must be experienced or encountered (Input), the information gained must be stored in some way (Knowledge) and subsequently utilized for either comprehension or production of the language (Output).

Two kinds of lines connect the various cells of the model. The solid lines are 'processing lines' and refer to obligatory relationships that hold between aspects of the model. Processing lines necessarily transfer information in the world into the representational system (Knowledge level) and processes are required to use the information for output or response.

The dotted lines represent language learning strategies which are defined as optional means for exploiting available information to improve competence in a second language (p.71).

LANGUAGE INPUT. Exposure to the language occurs in an undifferentiated context and is given the general title in the model of Language Exposure. Specific experiences can be identified within this concept and their particular effects postulated. The language classroom, for example, provides specialized exposure. While encountering the target language only through books or through immersion in the target culture would again provide different experiences. These differences can be documented in terms of their effects on the language learned.

KNOWLEDGE IN LANGUAGE USE. This level assumes that information about the language can be represented in three ways, described here as Other Knowledge, Explicit Linguistic Knowledge and Implicit Linguistic Knowledge. These do not represent in any physiological sense the way in which information is stored in the brain. Rather they refer to three types of information the learner brings to the learning task, and since each is considered to contribute to the attainment of language proficiency, they have been distinguished in the model (p.72).

The difference between Explicit and Implicit Linguistic Knowledge is defined operationally. Explicit Linguistic Knowledge contains all the conscious facts the learner has about the language and the criterion for admission to this category is the ability to articulate those facts. These may include some grammar rules, vocabulary items, pronunciation rules, and so on. Implicit Linguistic Knowledge is the intuitive information upon which the language learner operates in order to produce responses (comprehension or production) in the

target language. Whatever information is automatic and is used spontaneously in language tasks is included here. Again the content may include grammar and pronunciation rules, vocabulary and so on. It is in this sense that a language learner may claim that a sentence 'sounds' or 'feels' right, although no direct evidence for the accuracy of the sentence can be cited.

Three functions are assigned to Explicit Linguistic Knowledge. First, it acts as a buffer for new information about the language. For example, new phonetic and phonological information which is encountered in any explicit situation would at first be represented in this source. Only after continued use would the information become automatic and be transferred to Implicit Linguistic Knowledge.

The second function is to act as a store for information about the language which is always represented explicitly. Krashen(1976) has argued that some aspects of a second language are unconsciously acquired and as such, are not consciously known, while others are learned and remain in some conscious form. Even native speakers sometimes report the need for conscious attention in order to distinguish certain word meanings, grammar rules and pronunciations. Such items would be represented in Explicit Linguistic Knowledge. Thirdly, information which is represented in Implicit Linguistic Knowledge may be made explicit in this source (p.73).

Only one function is ascribed to the Implicit Linguistic Knowledge source. It is a working system containing all the information about the target language necessary for most spontaneous comprehension and production tasks.

The distinction between the two knowledge sources is defined in terms of function rather than content. Any information

may be represented in either source, and different second language learners will vary greatly according to the type of information found in each. A larger Implicit Linguistic Knowledge source is associated with an ability for greater fluency. A larger Explicit Linguistic Knowledge source is associated with an extensive knowledge of formal aspects of the language, but may not imply an ability to use this information well.

Other Knowledge refers to all the auxiliary, not specifically linguistic knowledge the learner brings to the learning task. It includes knowledge of other languages, such as the native language, information about the culture associated with the target language, knowledge of the world, and so on. Whereas the use of a word in appropriate contexts is implicit the specific cultural aspects of the meaning and its occasions for use may be articulated explicitly and would be represented in Other Knowledge. In this way links are assumed to exist between Other Knowledge and Implicit Linguistic Knowledge. The learner's knowledge of various cultural situations which require the speaker to change from one style of pronunciation to another would be represented in this source.

FORMING LANGUAGE RESPONSES. Output in the model refers to language comprehension or production. Two specific types of responses, Type I and Type II, are also identified. Whereas Type I responses are spontaneous and immediate, Type II responses are deliberate and occur after a delay, brief as it may be. Different type of language behaviour and different degrees of proficiency may be associated with each type of response. Reading, for example, may be associated more closely with Type II responses, since review of the written material is possible and there are few time constraints; while speaking,

with its demands for fluency, may force the production of only Type I responses.

The qualitative differences between Type I and Type II responses may help to explain why some tasks which rely primarily on Type I responses, such as speaking, are difficult. Responses of either type which are incorrect may be redirected to the general response cell to be modified or corrected. The responses then necessarily becomes a Type II response since a certain amount of time has passed since it was first formulated. (p.74)

The three levels describe the exposure, storage and use of linguistic information for the purpose of second language learning. The relationships between these levels are described by the processes and strategies of language learning.

LANGUAGE LEARNING PROCESSES. The processes which relate the three levels are Input processes, those relating Input to Knowledge, and Output processes, those relating Knowledge to Output. These processes obtain irrespective of any conscious intervention of the language learner.

The Input process relates Input to each of the three knowledge sources. The nature of the language exposure will determine the extent to which each of these knowledge sources is affected. A language classroom in a traditional formal program, for example, would probably accentuate the line from Language Exposure to Explicit Linguistic Knowledge. In this setting formal rules are taught and the subject of greatest concern is the language code itself. In relation to pronunciation learning this would probably take the form of learning the isolated sounds of the oral code and certain rules. (p.75)

An immersion class, however, may have its maximum

effects on Implicit Linguistic Knowledge and Other Knowledge. The information acquired during exposure to the target language is represented in these two sources. The vehicle for this information is the target language and this exposure, particularly in communicative situations, increases the implicit knowledge the learner has of the language. Communicative exposure is an important way of improving proficiency in, for example, listening comprehension and pronunciation. As the experience with meanings and forms is increased, these can be incorporated into the learner's own use of the language. It is only through such communicative exposure, either directly with native speakers or indirectly through recordings, films, etc., that the learner of English as a second language can acquire important oral forms which characterize native-like pronunciation. Similarly, immersion experiences in the target culture would probably have their maximum effect on Implicit Linguistic Knowledge and Other Knowledge. Only when explicit rules or word meanings are sought by reference to dictionaries or by asking native speakers or teachers would Explicit Linguistic Knowledge be particularly affected. (p.75)

THE OUTPUT PROCESS (p.75) describes the way in which language is used for comprehension or production. The assumption is that language use proceeds as a function of Implicit Linguistic Knowledge. It is only in particular circumstances of 'monitoring' that Explicit Linguistic Knowledge is used for comprehension or production. The length of the Output process line corresponds to a time dimension. Language behaviour should change under different time constraints if only in that longer times allows for greater accuracy. Second, a feedback loop from both Type I and Type II responses allows for

continual modification or correction of a response. The only restriction is that only one spontaneous Type I response may occur; if this has been corrected and fed back into the Output process line, then all subsequent responses must necessarily be Type II.

LANGUAGE LEARNING STRATEGIES.

These are defined as optional methods for exploiting available information to increase the proficiency of second language learning. In this way they are similar to strategies discussed by Stern(1975), Rubin(1975) and others, which refer to the conscious enterprises in which the language learner engages. Four language learning strategies are identified in the model, operating to bring relevant knowledge to the language task that has the effect of improving performance.

FORMAL AND FUNCTIONAL PRACTISING.

The first strategy specifies two kinds of practice which refer to a language learner's attempts to increase his exposure to the target language. The distinction is based on a classification postulated by Stern(1974) in which language may be considered 'formal' or 'functional'. In functional language use it is the meaning of the message that is of primary concern. While formal language focuses on the systematic features of the code used to represent that meaning (p.76).

Two possibilities exist for formal practice. The learner may avail himself of explicit knowledge of the code. An example would be the learner who studies from a grammar book in order to complement class lessons, or who asks others for information about grammar rules, morphemes, pronunciations and so on. Only those things the learner does optionally and in

addition to any formal training qualify as instances of this type of formal practice.

Formal practice is also used when the learner operates on information already in Explicit Linguistic Knowledge, transferring it to Implicit Linguistic Knowledge. According to Bailystok's model, the purpose of the language learning enterprise is to increase the information in Implicit Linguistic Knowledge, since language fluency operates as a function of this information. This type of formal practice is essential to this purpose.

Functional practice refers to increased exposure to the target language for communication. The relationship shown by functional practising which connects Language Exposure to Implicit Linguistic Knowledge is similar to the process postulated by Krashen(1976) called language 'acquisition' as opposed to language 'learning'. The language is internalized through communicative exposure rather than through formal exposure to the system(p.77).

MONITORING AND INFERENCING

Monitoring is a formal strategy which exploits information which is represented in Explicit Linguistic Knowledge for the purpose of improving Type II responses, especially those concerned with production of the language. It is essentially a production strategy, effective for shaping up the formal aspects of productive responses. It may also be used to bring explicit knowledge of word meanings and structures to a comprehension task to improve understanding of the message. A further use of monitoring involving inferencing will be described below.

Inferencing is a strategy whereby a learner may arrive

at particular linguistic information which was previously unknown. In the model inferencing is represented by the exploitation of information from several possible sources to arrive at some explicit information about the second language (represented in Explicit Linguistic Knowledge). The model identifies three sources for this information: Other Knowledge, Implicit Linguistic Knowledge and the understanding a learner has of a message (represented by the response cell). These three forms of inferencing will be discussed with reference to pronunciation learning in the next section.

Both monitoring and inferencing may be involved when information from Other Knowledge is brought into the production task to assist in the representation of particular meanings. For example, when the pronunciation of a morpheme or structure required by the speaker is not available in his Implicit or Explicit Knowledge sources, he may make an inference based on his knowledge of another language (Other Knowledge) to arrive at a new pronunciation form in the target language. This item, the product of inferencing, would be represented in Explicit Linguistic Knowledge. As a result, it may be used to monitor a production response. In this way, Explicit Linguistic Knowledge is increased by inferencing and the information is used to monitor a response. (pp.79-80).

PERFORMING LANGUAGE TASKS.

Bailystok considers how the model could account for a situation in which a second-language learner is engaged in conversation with a native speaker. The language task represented by this situation is considered as a whole. But the same situation can be considered from the point of view of the pronunciation task involved. In fact, intelligible pronunciation

would be a vital objective of the language learner, parallel to those of fluency and acceptable expression of information.

The model can be used to help to explain how the learner goes about reaching these objectives. Language Exposure which feeds into Implicit Linguistic Knowledge will give the learner a 'feel' for the way native speakers modify certain features of pronunciation. Strict adherence to rules is less important in this situation than is a capacity to pronounce the target language in a way which is intelligible to the native listener.

Implicit Linguistic Knowledge would provide the basic structures, vocabulary and pronunciation forms the learner requires to begin a conversation. He can improve his communicative competence through the use of the inferencing-monitoring combination. The Other Knowledge source is likely to be important for inferencing, generating hypotheses concerning the representation of previously unknown words, phrases, structures, pronunciations, and so on. (p.81)

According to the model, individual differences in achievement when learning a second language may be attributed to the extent to which various students use the learning strategies. Can the differences in accuracy of pronunciation commonly observed among learners who have had comparable amounts of formal language training, be attributed to differences in individual use of learning strategies?

In the terms of Bailystok's model, if phonetic and phonological information, presented during formal training and stored in Explicit Linguistic Knowledge, is not practised there is no benefit to Implicit Linguistic Knowledge, from which all responses emanate. That is, formal and functional practice,

because they increase the Implicit Linguistic Knowledge store, are the key to improving pronunciation performance. More monitoring would be required if the information remains in Explicit Linguistic Knowledge, and for communicative tasks such as pronunciation such over-use is not necessarily desirable. Accurate pronunciation requires largely Type I responses, whereas if monitoring is required the immediate timing essential to pronunciation is interrupted and TypeII responses result in hesitating, stilted pronunciation.(p.82)

Bailystok also suggests that other ability differences between individuals may determine the ease with which the learning processes occur, the amount of information the learner is able to extract from a given situation, the extent to which he may operate on available information,etc. The implications of this view for the research problem will be investigated in Part II.

The model may be used to interpret existing research by determining which aspects of the model are involved in various research approaches. Accordingly, evidence which may have appeared contradictory, may be found to be dealing with different aspects of the general model. Two features of the model which require further investigation are the role of the strategies in language learning and the effects of the time element in the Output process line on proficiency. Among the tentative pedagogical implications suggested by the model are the need to teach certain learning strategies and to provide particular kinds of language experience.

5.2

LANGUAGE LEARNING STRATEGIES

In this section a comparison will be made between the four learning strategies described by Bailystok and those strategies described by Joan Rubin to account for good language learning. This author has suggested that there are three aspects to be investigated to account for good language learning. These are:

- i) the learner's use of strategies to acquire knowledge and improve his performance;
- ii) the learner's motivation to communicate in the second language; and
- iii) the learner's exposure to the target language and opportunities to use it.⁷

The first of these aspects is considered in this section, the second will be discussed in section 5.7 and the third aspect is the subject of 5.3.

The most important technique of good language learning, according to Rubin, is a good guessing ability.⁸ The importance of guessing is due to the fact that, as in native language interactions, we never comprehend all that the speaker intended and must use whatever clues the environment and discourse may give. The second aspect of the guessing strategy is that the good guesser makes inferences as to the purpose, intent and point of view of a communication.⁹

Guessing, then, is vital to listening and reading

comprehension. Accurate listening comprehension is, in turn, essential to accurate pronunciation because, in order to use the intonation and stress patterns appropriate to his will and emotion at the moment of speaking, the learner has first to recognize such patterns in the speech of others, especially native speakers.

Rubin's description of the guessing technique supports the theoretical description of inferencing in Bailystok's model. The inferencing strategy lines of the model lead into Explicit Linguistic Knowledge from Other Knowledge, Implicit Linguistic Knowledge and the Response cell. The two aspects of the guessing technique described by Rubin correspond to the first and third type of inferencing in the model.

Inferencing from Other Knowledge, the first aspect of the guessing technique, would make use of the learner's knowledge of the subject matter, cues in the environment, gestures, knowledge of other languages, and so on.¹⁰ For example, knowledge of how a word is pronounced in another language may be used to infer the pronunciation of a similar word in the target language. The over-use of this type of inferencing accounts for the phenomenon of interference from the native language when learning to pronounce a second one.

A second type of inferencing, not mentioned by Rubin, is that in which information which is implicitly known about the target language may be brought to consciousness. For example, learners, like native speakers, may not consciously distinguish between the two 'l' sounds in bill and like because the distinction is not phonemically significant in English. But once the distinction is pointed out to them, the implicit

knowledge becomes explicit.¹¹

A third type of inferencing identified in the model, and referred to by Rubin as the second aspect of the guessing strategy, is primarily related to developing comprehension. The understanding the learner has of a message is represented by the Response cell. The information in this cell may be brought into consciousness to arrive at some explicit understanding of difficult material.¹² The learner's ability to use appropriate intonation and stress patterns, as well as to modify other aspects of his pronunciation according to a specific model, requires the use of this type of inferencing.

Another technique of the good learner noted by Rubin is that he monitors his own speech and the speech of others. He is always processing information and can learn from his own mistakes.¹³ In Bailystok's model monitoring is shown to operate by bringing information from Explicit Linguistic Knowledge to the language task for the purpose of examining or correcting a response. Thus 'learning from mistakes' can be accounted for from the model as follows: after an initial response (Type I), conscious knowledge of the language may enter the Output process line to produce a corrected (TypeII) response.¹⁴

A third technique or strategy discussed by Rubin is that activity in which learners take opportunities to practise the target language and are willing to make mistakes (for example, in the pronunciation of new vocabulary items) in order to learn and communicate. Specifically related to pronunciation learning, Rubin concludes that the good learner may try to isolate those features which give him maximum intelligibility. He may develop a feeling for the phonological clues which best enhance intelligibility. In English, this might mean that he emphasises

accurate production of intonation patterns over that of individual sounds because of the intimate relationship of these patterns with syntax. In English, some mispronunciation of individual sounds will be tolerated if intonational patterns are accurate.¹⁵

This technique corresponds to functional practice in Bailystok's model, since the learner's purpose is to understand (for example, when watching a movie or reading a book) and communicate (when talking with native speakers). According to the model, most of the knowledge acquired in such encounters will be directly available for language response. An example of the use of this strategy is the situation in which the learner practises pronunciation and other skills when conversing with a native speaker, as described by Bailystok.¹⁶

Joan Rubin also hypothesises that the good learner finds ways to make the things he must memorize more meaningful. Carroll (1966) suggests that 'the more meaningful the material to be learned, the greater facility in learning and retention.'¹⁷ This ability is essential to the formal practising strategy as described in the model. When the learner obtains new information concerning pronunciation and other second language skills, he may form associations between the information and the context in which it is gained or some other element of the code to which it belongs.

For this reason, the semantic context in which linguistic information is conveyed in formal practice items should facilitate rather than distract from the desired learning. In the first type of formal practising the learner is provided with explicit information about the code, for example, certain phonological rules and stress patterns. If the information

gained is meaningful to the learner it will be more easily established in Implicit Linguistic Knowledge through the second type of formal practising.

As noted by Charles Parish¹⁸, there are many things going on in the speech chain, and the student at any given time is capable of processing only a certain proportion of that information. As his basic skills develop his capacity for processing apparently increases, allowing him to focus not only on syntax but also on other features of structures such as how they are pronounced. An implication of this rate of development is that the student is better prepared, the more advanced he is in exposure to the language, to analyse a particular modification in pronunciation and to attempt to adopt a required change.

This, and the five other methodological principles outlined by Parish, would seem to be relevant as guidelines for the introduction and use of the strategies discussed above for pronunciation learning. The effective use of these strategies requires that they form an integral part of the learning activities and that they correspond to the students' level of linguistic readiness at any particular time.

5.3.

LANGUAGE EXPOSURE

What is the relative importance of formal and informal language exposure for pronunciation learning? On this question the results of a study carried out by Stephen Krashen and Herbert Selinger¹⁹ will be compared with the relevant findings in a study made by Richard Suter²⁰. The results of this latter study are considered in section 5.6. Both studies concern learners living in an environment where English is the native language. Krashen and Selinger studied the relative effects of formal and informal environments on oral skills. The two studies have rather different criteria and conclusions. But it will be seen that they provide complementary evidence on the present question.

In Krashen and Selinger's study, 36 adult students were ranked for oral skills (especially grammatical accuracy, fluency and oral comprehension). Accuracy of pronunciation was not included, but certain inferences can be made from the study despite this exclusion. The students' performance was measured by a teacher ranking on the basis of general classroom performance in the spoken language. The rankings of the students were correlated with their 'talking scores' (determined from a questionnaire which measured how much English they had spoken in informal environments and the number of years of formal instruction they had had in English).

In the study, an informal environment was considered

to be similar to the primary linguistic data the child is exposed to (Chomsky, 1964), that is, unorganized with respect to sequential presentation of isolated structures.²¹ A significant correlation was found between formal classroom training and oral skills, but there was a low correlation between oral proficiency and amount of conversational practice in informal environments.

These findings imply that some learners are able to utilize natural communication situations to improve their oral proficiency only up to a certain point. Beyond this point the learner is primarily dependant on the structured feedback of formal language instruction for further progress.²² But the fact that pronunciation accuracy was not included in the assessment of oral skills implies that the investigators suspected that it may not be acquired in the same way as the other skills. It is feasible to suggest that those aspects of pronunciation which are most important for native-like accuracy are accessible to the learner only in natural language situations.

The value of the study is also reduced by the fact that the various skills were not measured separately but lumped together. It can be argued that fluency, because it is closely related to rhythm and intonation in the pronunciation skill, may have shown different correlations with formal and informal language exposure if it had been assessed separately.

In Richard Suter's study a negligible correlation was found between amount of formal classroom training and pronunciation accuracy.²³ But the variable of informal language exposure was found to be strongly related to pronunciation accuracy.

For the learner of English living in a country where it is not the native language, access to natural communication situations is usually very limited. The learner depends on occasional chances for conversation with native and non-native speakers. In these circumstances, learners are unlikely ever to reach the point where they can no longer benefit from informal language exposure. In this context, the claims made by Krashen and Selinger for the greater importance of formal training over informal practice for developing oral skills seem to be overridden.

Bailystok's model does not set up a contrast between formal and informal language exposure. Rather, it provides for the identification of many specific experiences within the undifferentiated context in which exposure to a language occurs. The description of practice strategies in the model is based on a classification postulated by Stern (1974) in which language use may be considered 'formal' or 'functional'.²⁴ This classification cuts across the boundaries between the 'formal' and 'informal' language exposure considered by Suter, Krashen and Selinger and others. For example, when a learner asks others for information about pronunciation forms outside the formal classroom situation, he is seeking formal information in a functional situation. Also, in the classroom the focus may be shifted from the formal code to practise functional language. This occurs when students listen to recordings of English used in 'real life' situations in order to understand the gist of the situation, but not to analyse the language.

Natural communication situations inside the classroom in which learners are able to practise their pronunciation skill, are less common. Classroom dialogue between teacher and

student or student and student, although vital for improving pronunciation accuracy, is usually more controlled and selective than the inhibited language of daily use. This practice will always be formal to a large extent. But, depending on the teacher's ability to create an objective, non-judgmental atmosphere in the classroom, valuable functional practice may occur together with formal practice.

Bailystok's model, then, suggests the importance of teaching learners formal and functional practising, among other strategies, for effective pronunciation learning. The question of which type of exposure, formal or informal, is more important for acquiring pronunciation and other oral skills, becomes irrelevant. This point is exemplified clearly by the model itself. Through the second formal practice strategy, explicit information which the learner has about the language code becomes more familiar and available for forming language responses. Secondly, through functional practice, the learner adds to his implicit knowledge of how to convey meaning in the target language.²⁵ This point will be illustrated in various ways in the section which follows and in the rationale for pronunciation teaching in the final section.

5.4

APPLICATION OF THE MODEL

With the perspective provided by Bailystok's model, the discussion of learning strategies and of language exposure, the research problem can now be considered more closely. The question of why some learners pronounce English more accurately than others will be applied to those students in countries where English is not the native language. In this case, language learning experiences occur mainly through formal classroom exposure. This exposure is formal in the sense that it is organized and selected to a greater or lesser extent, in contrast to the totally random exposure which occurs with immersion in the native culture.²⁶ So the problem is to account for variations in pronunciation accuracy among learners of English as a second language who have had a similar amount of formal classroom instruction but little or no informal contact with native speakers outside the classroom.

A particular group of these students will have had similar exposure to the phonetic and phonological aspects of English. Through formal training, some of this information would be represented in Explicit Linguistic Knowledge as formal pronunciation rules. The learner may use the formal practice strategy, studying books or asking others for information about the pronunciation of English, in order to increase his explicit knowledge. But the student is also exposed to a considerable amount of phonological and phonetic information

informally when he listens to the English used by teachers, by others or in recordings, for any purpose, both in the classroom and elsewhere. In the terms of the model, some of this latter information would pass directly into Implicit Linguistic Knowledge. The learner may use the functional practice strategy, deliberately arranging for such exposure to occur so that his implicit knowledge of English may be increased.²⁷

As the learning process continues, the explicitly learned information may also be represented in Implicit Linguistic Knowledge through the second type of formal practising, using exercises and drills. The learner would then use this information implicitly in his pronunciation of English. Secondly, through the strategy of inferencing, implicitly known information can be brought into consciousness and represented in Explicit Linguistic Knowledge, providing the means for deriving the correct pronunciation of new words and phrases.²⁸

The input of linguistic knowledge, according to the model, involves a third source - Other Knowledge. It is this source which may be decisive for learning to pronounce a second language accurately, since it would include knowledge of which pronunciations are tolerated in which styles of speech in the target language. Through inferencing, this information would be represented in Explicit Linguistic Knowledge, allowing the learner to employ the variants of the language in the same pattern and to progress from one style to another as nearly like a native speaker as possible. The learner would acquire such information from the variety of pronunciations and styles available to him both in the second language classroom and elsewhere.

As noted in the discussion of Bailystok's model, the

processes and strategies involved in pronunciation learning can be exemplified with a situation in which a second language learner is engaged in conversation with a native speaker.²⁹

The learner may begin his conversation on the basis of Implicit Linguistic Knowledge and improve his communicative competence by the use of the inferencing-monitoring combination. An important source of information for inferencing would be knowledge of the target culture and of the subject matter.

As noted by Bailey³⁰, an essential element of acquiring a native-like accent is to learn to control those phenomena called 'mistakes' by laymen and 'late assimilatory and other rules' by linguists. In English, for example, pronunciations with b sound non-standard in slow, precise pronunciations of government, seven and have them. But b is native-like in these examples in allegro speech. Other well-known examples are lemme, gimme, monts (for months) and idn't (for isn't it). The ability to use such forms in their proper implicational patterns and the appropriate styles of speech is a strong clue to a native-like accent.

The learner will generate hypotheses concerning the appropriate use of such forms from the topic of conversation, style of speech and the particular style of the native speaker with whom he is conversing. These hypotheses may be incorporated into his own pronunciation through monitoring. Depending on the proficiency of the learner and the extent to which he engages in these strategies, his pronunciation responses will be a combination of Type I and Type II. The degree of accuracy obtained by the learner will indicate the extent to which the responses are Type I and hence are initiated solely on the basis of Implicit Linguistic Knowledge.

5.5

INDIVIDUAL LEARNER CHARACTERISTICS

In this section a survey will be made of several theoretical accounts of those individual learner characteristics considered to influence performance when pronouncing a second language.

As indicated in the discussion of Bailystok's model, individual differences in performance may be attributed to the extent to which various learners use the learning strategies. The individual's characteristics as a learner and his learning background may, in turn, determine the ease with which the strategies and learning processes function. Thus, an optimal set of individual characteristics would maximize the amount of information the particular learner is able to extract from a given situation, the extent to which he may operate on available information, and so on.³¹ In the following discussion these considerations will be applied specifically to pronunciation learning.

It is apparent that individuals vary in several ways when learning to pronounce a second language with accuracy according to a particular model.³² Various authors have referred to these individual differences. They will be considered from the point of view of how they influence the learner's use of strategies to improve his accuracy when learning to pronounce a second language. Several theoretical accounts of these differences will be considered before reviewing a study by

Suter of twenty variables, including certain individual differences, suspected of displaying significant relationships to pronunciation accuracy.

The first and most obvious of these differences is the learner's native language.³³ The fact that a learner's native language can often be identified from his characteristic accent when speaking a second language, indicates the great influence of the experience of learning the first language on his efforts to pronounce the second. Cultural differences in cognitive learning styles may also affect the use of strategies. In some societies, listening until the entire code is absorbed and one can speak perfectly is a reported form of learning. In others, successive approximation to native speech is used as a learning strategy. While in still others, rote learning is the most common learning strategy.³⁴ So a student's choice of and ability to use certain strategies may be influenced by his cultural background.

Stevens³⁵, notes that another difference between learners will be their previous experience of foreign languages, whether of hearing them only or of learning one or more. It might be expected that both the type of learning experience and the level of achievement would influence the learner's ability to use the learning strategies in order to improve his pronunciation accuracy.

Differences in auditory discrimination and alertness of hearing as well as in the instinctive ability to mimic new sounds, undoubtedly account for the greater facility of some learners in controlling the speech mechanism and in monitoring their own performance.³⁶ Rubin notes that some students learn better by visual means, others by auditory means.³⁷ Learners

who have less innate aptitude for oral mimicry may benefit from formal training in this skill and more functional practice to increase their exposure to the sounds of the target language.

Differences in speed of learning are likely to be particularly important for pronunciation learning. This is because in pronunciation, the organization of syntax and semantics, having first been generated in the brain as a series of solely mental processes, is converted into psycho-motor activity.³⁸ Being psycho-motor rather than solely mental, pronunciation learning, like all muscular training, will require more time and effort for some individuals than for others.

Rubin notes that certain personality traits (perfectionism, self-confidence, extroversion) are also reported to affect the choice and use of learning strategies.³⁹ Learners also vary in their willingness to learn to pronounce a second language. 'Willingness' involves the learner's confidence in his own ability to learn the new sounds as well as his attitude to the target culture.⁴⁰ This variable will be discussed in 5.7 below, when motivation and attitudes are considered.

Stevens (p.184) gives particular attention to the changes brought on by age. He considers that in general, adults have reduced plasticity for language acquisition. Compared with children, most adults have reduced auditory discrimination, perhaps because the auditory facility of the young child is less essential after the acquisition of the sound patterns of his own first language. Adults are also considered to have reduced powers of mimicry, partly because mimicry is a kind of game behaviour less common after childhood. Other disadvantages noted are greater reliance on writing at

the expense of speech and unwillingness to make unfamiliar noises or to commit errors, especially in public.

Nevertheless, notes Strevens (p.185), there are three main reasons why adults may be able to learn to pronounce a second language as well as young children. First, because some adults retain their pronunciation-learning ability unimpaired, for all practical purposes, after childhood. Secondly, because the majority of sound features are imitated with reasonable accuracy by the majority of learners without a need for special training. And thirdly, because adults also possess certain advantages which counterbalance the disadvantages already mentioned.

The adult has learned how to learn so he can take more learning profit from each hour of teaching than the child can. He has greater powers of deliberate concentration and less need for inherent interest in the teaching materials. The adult can follow detailed instructions and can intellectualize his learning. Once an adult has learned, for example, about the nature and the function of the soft palate and its connection with nasality, he is then able to deliberately control the nasal-oral distinction in his own speech. According to Strevens then, (p.186) adults have different but not necessarily inferior language-learning capacities than children. Meanwhile, Rubin considers that adults probably do better at guessing, having at their disposal multiple hierarchies of redundant clues. Children may be freer in adapting to new situations and to act out a communication.⁴¹

Newmark and Reibel argue that the same language learning capacity exists in adults and children, quite possibly in different degrees. They maintain that neurophysiological

evidence may be used to argue that adults are quantitatively inferior to children as language learners. But it cannot be used to argue that they are qualitatively different kinds of learners. Rather, these authors argue, adults and children share a language-learning capability which enables them to acquire the general use of a second language by observation and exercise of particular examples of the language in use.⁴²

The fact that most adults speak a second language with an accent is usually taken as evidence of the different and inferior ability of adults compared with children. But Newmark and Reibel provide an account of 'foreign accent' which indicates not that the adult learner is subject to inference from his native language, but that he actively draws on his prior linguistic knowledge to meet the demands to produce responses in the new language. The following account of 'foreign accent' does not challenge the value of inferencing for language learning. Rather, it indicates that for pronunciation learning in particular, and for other skills to a lesser extent, inferencing from Other Knowledge is an inadequate basis for forming language responses:

In the early stages of learning a new language there are many things the student has not yet learned to do. But he is induced to perform (understand, speak, read or write) in the new language by a teacher or by his own desire to say something. To an observer who knows the target language, the learner will seem to be stubbornly substituting the native habits for target habits. But from the learner's point of view, all he is doing is the best he can: to fill in gaps in training he refers for help to what he already knows. Viewed from this angle, the problem reduces to that of ignorance and

*the solution to the problem is simply more and better training in the target language, rather than systematic drill at the points of contrast between the two languages in order to combat interference.*⁴³

In the terms of the model, the learner needs more and better exposure to the target language in order to develop his Implicit and Explicit Knowledge sources. He also needs extensive training in the strategies of formal and functional practising, monitoring and inferencing to maximize the effects of his limited contact with the language and to improve the accuracy of his pronunciation responses.

In section 5.6 a review will be made of an experimental study of twenty variables (including various of the individual differences which have been considered in this section) suspected of displaying a significant relationship to pronunciation accuracy.

5.6. . . . AN EXPERIMENTAL STUDY OF FACTORS
AFFECTING PRONUNCIATION ACCURACY.

In a study conducted at the California State Polytechnic University, Richard Suter measured sixty-one non-native speakers on twenty variables suspected of displaying significant relationships to pronunciation accuracy. The study was designed to develop evidence on why speakers of a second language vary so much in the accuracy of their pronunciation. (p.233). As the study concerned non-native speakers resident where the target language is spoken, the findings may not be fully applicable to learners resident in their own country who are studying the pronunciation of a second language. But this difference is not likely to alter the significance of most of the findings for the question of accuracy of English pronunciation among such learners.

The English pronunciation of the non-native speakers was rated under controlled conditions by a panel of fourteen native English-speaking judges. Of the twenty variables, the thirteen concerning biographical facts and the learner's contact with English were measured using the interview technique. Suter maintains that in a formal one-to-one interview a speaker can be taken step by step back through his experiences in English with an accuracy which is not possible with a written questionnaire(p.237). The five motivational variables were measured using a scaled objective form(questionnaire). This was considered a less threatening and thus more valid method

than the interview, for the speaker to provide such information. The two variables concerning aptitude for oral mimicry and 'introversion-extroversion' were measured using appropriate tests.

From a consideration of just how well each of the predictor variables correlated with pronunciation accuracy in English, empirical evidence was obtained for which factors have a significant influence on pronunciation accuracy. The variable which correlated most strongly with pronunciation accuracy was native language. The significance of this high correlation is enhanced by the fact that of the four native language groups represented in the study, the Japanese and Thai speakers were almost all ranked low by the judges on English pronunciation accuracy. The Persian and Arabic speakers were almost all ranked higher on the same scale. These results provide empirical evidence that native language is a significant predictor of pronunciation accuracy (p.244).

Table 3(pp.245-6) in the report of the study shows those other variables which proved to show a significant correlation with pronunciation accuracy. Two of these were shown to be, like native language, particularly important for pronunciation accuracy: 'strength of the speaker's concern about his pronunciation of English' and 'amount of conversation at work and at school which was carried out in English with native speakers'. These will be discussed further. Of the other eight significant predictors, two were found (contrary to expectation) to be negatively related to pronunciation accuracy. These were 'total amount of formal classroom training in English' and 'integrative orientation'. Eight variables proved to be non-significant in the study. These are shown in Table

4(p.247).

Of course, not all of these findings are likely to have equal significance for learners of English pronunciation in other situations. Learners in their native environment are likely to have many fewer opportunities to practise the target language than those who are living in an environment where it is spoken. This difference would limit the value of the findings on the variables of formal and functional contact with the target language with reference to learners in their native environment.

The predictor variables in the study made by Suter can now be considered individually. The factor which was found to be most significant would seem to be equally important among learners who are in their native environment. Of the four different languages represented in the study, it was found that those speakers whose language was Indo-European - Arabic or Persian - were consistently better at pronouncing English than those whose native language was not Indo-European - the Thai and Japanese speakers. It can be suggested that the phonological structures of other Indo-European languages probably facilitate the pronunciation of English to a greater extent than the structures of languages outside this group.

These findings seem to be relevant to Brazilian students of English. The phonological structures of Portuguese are likely to facilitate the pronunciation of English for these learners. But in order to establish how this might be so, it would be necessary to compare the phonological structures of the two languages. One would have to consider not only the phonemes and allophones of the two languages, but also such things as the placement of stress, intonation patterns,

tempo(i.e. the speed at which syllables succeed one another), and any characteristic patterns of loudness, continuity(the incidence of pauses), tessitura(the range of pitch that is used while speaking) and register(the quality of voicing).

In such a comparison of the two languages, some determination would be needed as to which phonological qualities are given most consideration in judgments of the accuracy with which Portuguese speakers pronounce English. Distortions of some things presumably influence judges more than distortions of others. It is usually considered that the most significant features are the sounds(phonemes and allophones) and the patterns of rhythm, stress and intonation. It would seem that variations in loudness, tessitura and register are less likely to influence judgments of accuracy of English pronunciation when the speaker's native language is Portuguese or some other Indo-European language, than if it were from another language group(p.248).

When assessing the English pronunciation skills of any group of Brazilian learners, a primary consideration would be the languages spoken in the learner's home. If an Asian or some European language other than Portuguese was spoken at home when the learner was young, this might be expected to influence the relative accuracy of his English pronunciation, compared with that of learners who have not been in contact with other languages. There is no substantial evidence available to explain why this should be so. But, as noted by Suter, phonological interference is one possibility(p.249).

Another strong predictor of pronunciation accuracy in Suter's study was individual motivation, measured as 'speaker's strength of concern about his pronunciation'(p.249-50).

This variable measured the strength but not the nature of the concern. In the study, economic, integrative and social prestige motivation were shown to be relatively unimportant as predictors of pronunciation accuracy, so presumably some other kind of information was at work. Suter suggests that 'strength of concern' may reflect an overall conscientiousness. He surmises that future research may provide evidence that those who are most concerned about doing well at the different tasks in their lives are the ones who do best in the pronunciation of their second language. It also seems reasonable to suggest that the variable 'strength of concern' in the study may reflect a desire to achieve native-like accuracy in order to respond appropriately to native speakers of the target language.

The variable 'integrative orientation' proved to be negatively related to accuracy of pronunciation in the study. This variable is defined in the study as 'the desire to "be" a member of the group which speaks the target language natively.' But the three items which were designed to assess this variable imply a view of pronunciation learning as a means to ready acceptance by members of the target culture. These items would seem to be more relevant to the objective of intelligibility than to native-like accuracy.

The third best predictor in the study was 'the amount of English conversation at work and at school which was carried on with native speakers'. As Suter notes, this is the only important predictor of pronunciation accuracy that can be influenced by teachers. A student's native language cannot be changed and his 'concern' about his pronunciation is

largely a personal matter, although teachers may be able to strengthen it. Yet teachers can make some provisions for getting non-native students to use English more with native speakers (p.250).

One of the most surprising findings was that the variables relating to classroom training demonstrated very little relationship to pronunciation accuracy. The speakers who had more formal training dedicated specifically to the pronunciation of English were not significantly better pronouncers. Since this variable measured the relationship of much versus little training in pronunciation, it is conceivable that a little formal training is essential for pronunciation accuracy, but that training beyond that point is simply unproductive. Secondly, the variable assessed the amount rather than the quality of the training received. It is possible that the quality of training in pronunciation, if it could be measured, would demonstrate a significant relationship to pronunciation accuracy (p.251).

The findings of Suter's study give some support to the belief that informal exposure is more important than formal classroom training in the development of pronunciation accuracy. The variables which might be interpreted as measuring informal exposure to English were i) the amount of conversation at work and at school which is carried on in English with native speakers of English, ii) the number of years the speaker has lived in English -speaking countries, iii) the amount of conversation at home which was carried on in English with native speakers of English, and iv) the length of time spent residing with native speakers of English. These variables show a stronger relationship to pronunciation accuracy than the

relationships displayed by those variables concerned with formal instruction (p.251).

Although there is a persistent belief that females are superior to males where verbal skills are concerned, females were not significantly better pronouncers than males in this study(p.252). Also, extroversion was not a significant predictor of pronunciation accuracy(p.252). In general, there was little in the study to contradict the extreme position which argues that a person who learns a second language after the onset of puberty will never pronounce it well enough to pass as a native speaker(p.251-2).

5.7.

AFFECTIVE FACTORS AND
PRONUNCIATION ACCURACY

It has been suggested that affective variables may play a more important role than does biological maturation in problems associated with adult second language acquisition. Schumann⁴⁴ observes that aptitude seems to be more important for language learning through formal instruction rather than through direct exposure to the second language environment. He notes that intelligence and aptitude are fixed characteristics which appear to have greatest influence in the acquisition of academic skills (grammar, translation, rote memorization of vocabulary, etc.). Also, aptitude seems to operate independently of many of the affective variables involved in second language learning.

In their studies of second language learning among secondary school students, Gardner and Lambert (Gardner, 1960, Gardner and Lambert 1959, 1965, 1972) have demonstrated the variable effects on second language learning of instrumental orientation (the desire to learn the second language for utilitarian reasons such as to get a better job or to advance socially) and integrative orientation (the desire to 'be' a member of a group which speaks the target language natively). These investigators have provided experimental evidence that students who have an integrative orientation towards the second language are more successful than those who are instrumentally motivated. In particular, they more easily acquire

intelligible pronunciation. An interesting question is whether these findings are relevant for adults living in their native culture and learning English as a second language.

Another observation which has been substantiated by the findings of Gardner et al. (1976) is that motivation in second language learning is shaped by the learner's attitude towards the foreign culture, towards learning a second language and towards the classroom situation. The following discussion maintains that affective factors have a central role in the acquisition of pronunciation accuracy.

What can be said for economic and social prestige motivation (examples of instrumental orientation) in accounting for accuracy of English pronunciation among learners living in their native culture? Any such learner is likely to agree that one or both of these types of motivation help to account for his efforts to learn to pronounce the second language. But effort cannot necessarily be equated with achievement. Although instrumental orientation probably motivates most second language learners, it is questionable whether it can help to account for different levels of achievement, particularly with skills such as pronunciation. In fact, between the initial motivation and the achievement are the learning experiences. As Newmark and Reibel affirm,⁴⁵ inadequate teaching methods will inevitably have an adverse effect on ongoing learner motivation and achievement.

Newmark and Reibel question the importance of instrumental motivation as a factor distinguishing adults in their language learning ability. They observe that the young child is fluent in his language very early, increasing his fluency in direct proportion to his knowledge of the language. While

the classroom student's knowledge often allows him to do everything with the language except use it. In arguing for the relevance of motivation in accounting for observable differences in success in language learning, strong motivation has been posited in successful cases and its presence denied in unsuccessful cases. Whereas for Newmark and Reibel, ongoing motivation is a result rather than a cause of successful language training.

McDonald and Sager⁴⁶ have distinguished between the two forms of motivation in terms of the stage of learning. They attribute an initial interest in learning a second language to instrumental orientation, while continuing interest and effort with skills such as pronunciation are attributed to cultural and intellectual motivation. This distinction helps to clarify the view of Newmark and Reibel. Whether or not learners develop an integrative orientation (as implied by cultural and intellectual motivation) towards the target culture may depend largely on the image of the target culture conveyed in the classroom.

Where pronunciation learning is concerned, it has been claimed (Stevick, 1978) that the learner's attitude towards the target culture may be the most significant factor in the level of accuracy reached. In Stevick's view,⁴⁷ pronunciation can be seen as the primary medium through which we bring our use of language to the attention of others. Therefore it is potentially useful and in many situations indispensable. But it also makes the speaker vulnerable to his hearers either on account of the social inferences that they may draw concerning him or on account of the opinions that they may form concerning his proficiency as a learner, or both.

So the potentially good student whose reference group does not approve of the foreign culture or whose classmates achieve less than he can, will have to choose between two unpleasant alternatives: submit to the pressure of the reference group or defy that pressure and attempt to acquire a native-like pronunciation of the target language. With reference to such learners Stevick comments that:

*The subtle 'subphonemic' and 'suprasegmental' aspects of pronunciation, precisely because they are less necessary for intelligibility or for 'academic correctness' are the parts of pronunciation which carry the greatest amount of information about the student's loyalty to his native group or his openness to the target culture.*⁴⁸

Stevick implies that those learners who go beyond the objectives of intelligibility and 'academic correctness' must learn to control the subphonemic and suprasegmental aspects of pronunciation in order to achieve the objective of native-like accuracy.

According to Stevick, then, when the objectives of pronunciation learning are intelligibility and 'academic correctness', the subphonemic and suprasegmental aspects of pronunciation do not require particular attention in the teaching program. These objectives can be reached by systematic teaching steps towards a defined standard of intelligibility. It is assumed that once a learner masters the desired standard he will be intelligible to native speakers.

The learner motivation which corresponds to this objective then, is the desire to learn the language for utilitarian reasons - instrumental orientation. This form of

motivation seems to be based on a practical need to be understood by speakers of the target language, and the pronunciation skills acquired become means to that end. The learner's need can be met in the formal environment of the classroom. Since he does not need to seek opportunities for functional practising with native speakers, his loyalty to his own cultural group is not challenged.

Stevick's statement also implies that learner's who are 'open' to the target culture may succeed in controlling the 'subphonemic' and 'suprasegmental' aspects of pronunciation either through their own efforts or with the help of an extended teaching program. The basis for such 'openness' would seem to be a personality trait similar to what has been described by Taylor et al.⁴⁹ as 'empathic capacity', which is held to include the ability to understand other people's feelings, to appreciate the details of their behaviour and to respond appropriately.

Gardner(1966) and Lambert(1963) suggest that this basic personality disposition is linked with integrative orientation. There is evidence that the contrary disposition, a tendency to self-sufficiency and prejudice against outsiders, is often reflected in poor second-language achievement. A person who makes little progress with the pronunciation of a second language may be resisting what seems to him to be an encroachment on his personality.⁵⁰

The question arises whether an 'empathic capacity' is related only to the phonological aspects of second language learning or if it is also related to the acquisition of morphology, syntax and vocabulary. Alexander Z. Guiora and associates, who have been attempting to study the relationship

between empathy and the ability to pronounce a second language, suggest that there is a special link between empathy and pronunciation. Guiora (1972) defines empathy 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 another, this sensing being used by the cognitive functions to gain understanding of the other.

Guiora⁵¹ appears to equate empathic capacity with the concept of permeability of ego boundaries. Thus he further hypothesises that individual variations in the ability to approximate native-like pronunciation in a second language are, in part, determined by certain psychological variables best subsumed under the construct empathy, or more broadly speaking, the concept of permeability of ego boundaries. (1972-14)

Guiora articulates a theoretical model in which he proposes (1972) a psychological construct "language ego" which he sees as similar to the Freudian notion of body ego. In the course of development of this language ego, the lexis, syntax, morphology and phonology of the individual's language acquire physical outlines and firm boundaries. In the early formative stages of ego development the language barriers fluctuate. But once ego development is completed the permeability of the boundaries is sharply restricted. For Guiora:

Pronunciation is the most salient aspect of the language ego, the hardest to penetrate (to acquire in a new language), the most difficult to lose (in one's own).⁵²

These theoretical speculations lack experimental verification but they do carry intuitive appeal. Children do generally

learn a second language without an accent, becoming bilingual does seem to involve taking on a new identity, 'foreign accents' are difficult for adults to overcome and the desire to take on a new identity is often associated with successful second-language acquisition.

Guiora et al. (1972b) in an experiment which involved assessing subjects' pronunciation of a second language after the ingestion of small amounts of alcohol, provided some evidence that pronunciation ability is dependent on permeability of ego boundaries.

Guiora (1972) also suggested hypnosis as an experimental procedure which could both lower inhibitions and make a person willing to modify a basic self-identification (the way he sounds). The results of an experiment undertaken by Schumann et al.⁵³ indicate that deeply hypnotized subjects (as defined by self-reported depth) performed significantly better than less well hypnotized subjects. These results give some experimental support to Guiora's hypothesis.

Schumann maintains that empathic capacity or ego flexibility, particularly as operationalized under the concept of lowering of inhibitions, is best regarded as an essential factor in the overall ability to acquire a second language, rather than simply in the ability to acquire native-like pronunciation. If it is accepted that 'lowering inhibitions' is necessary for the acquisition of a second language in general, then Guiora's experiment (1972b) is particularly important. If artificial agents such as alcohol can foster permeability of ego boundaries and reduce inhibitions then it would not be unreasonable to assume that given favourable natural psychological factors, permeability of ego boundaries might be possible

for everyone.

Stevick⁵⁴ accounts for learner reluctance to imitate the sound patterns of a second language in less theoretical terms:

For a person whose upbringing and previous social development have left him uncomfortable with the people of a certain culture, any success at mimicry of the language of that people will set up conflicts with the self-image he has come to depend on.

But deep affective factors may promote as well as inhibit mimicry. Stevick suggests that for some people the experience of sounding foreign may be satisfying and positive, especially if, during an individual's adolescence, his family was orientated towards groups outside the dialect area to which his peers belonged. This thesis is developed by Stevick in *Memory, Meaning and Method*, particularly in chapter 4 where he affirms that 'the very utterance of words depends on sources far beyond the linguistic level.'⁵⁵

Permanent pronunciation changes come about, then, to an extent which is consistent with the student's self-image, through work which is done by the student, and as part of his developing relationship (real or imaginary) with speakers of the target language. The student's own self-image determines how much effort he is willing to make. But the limit which the self-image imposes may be changed by an improvement in the learner's feelings towards speakers of the language. A skillful, persistent teacher may achieve some temporary changes beyond this limit. But the learner will resist, often unconsciously, practising these changes in his speech outside of the classroom.⁵⁶

Whether a psychological account such as that of Guiora or a sociological one such as Stevick's is used to describe the influence of affective factors in pronunciation learning, it is evident that certain aspects of English are likely to be understood and controlled only by those learners who have a strong wish to 'sound like' a native speaker. In order to respond to native speakers appropriately, communicating his own intentions, opinions and emotions, the learner must develop the ability to express will and emotion through the correct intonational patterns. It is also apparent that native speakers progress from one pronunciation style to another, depending on the audience, the medium and the mood of the speaker. So the learner must also be able to distinguish and control the various styles within the pronunciation of the group which has been selected as a model.

In order to be able to use these variants in their proper implicational patterns, a learner needs to appreciate that certain forms of expressing intention and feeling in the target language will have a different emotive force than in his own language. An example is the use of intonational patterns together with facial expressions to indicate understatement in English. When a learner acknowledges the validity of such distinctive forms in the target language, he confirms his openness to that culture and his willingness to learn how to express his own intentions, opinions and feelings in that language.

Only those students who are positively orientated towards the target culture are likely to use the learning strategies to practise these features. They may decide to seek extra knowledge about the features of pronunciation, especially

subphonemic vowel reduction and suprasegmental intonation patterns, which characterise native speakers. They will take opportunities to listen and speak in communicative situations, monitoring their own speech and that of others. In addition, they will expand their operative knowledge of pronunciation forms by inferencing from their knowledge of the target culture, from their implicit knowledge of pronunciation forms and from their own responses and those of others in functional situations.

The central role of attitudinal factors in pronunciation learning has clear implications for pronunciation teaching. These are considered in the final section where a rationale for pronunciation teaching is discussed.

5.8. A RATIONALE FOR PRONUNCIATION TEACHING.

This final section will be concerned with providing a set of principled reasons for selecting an appropriate course of action, that is, a rationale for teaching the pronunciation of a second language. It will draw on the views of various of the authors referred to in this paper, in particular, Stevick, Strevens, Bailey and Newmark and Reibel.

Strevens⁵⁷ claims that for the purposes of establishing the most appropriate methods and techniques for teaching pronunciation to a given group of learners, it is not a theory that is required but a rationale. Such a rationale should be open to phonetic theory, phonological theory and theoretical statements about the relationship between phonology and syntax, but not attempt to transfer scientific theory directly to teaching practice.

There is some difference of opinion among the authors mentioned above about the most effective teaching approach to facilitate pronunciation learning, especially of those features of the second language which the learner's native language disposes him to overlook. But it will be seen that these differences are of emphasis rather than of orientation. The views of each of these authors are consistent with the position of Newmark and Reibel⁵⁸ who challenge the claim that the language course writer and the teacher must order pedagogical material to reflect a theoretically sound description of the

native and target languages, and 29 that language is most efficiently taught when structure is taught separately from use (as implied by structural drills). These claims show little consideration for the role of the learner (except as a generator of interference), and little concern with learning to use a language. The authors mentioned above acknowledge the primary role of the learner, especially in acquiring skills such as those involved in accurate pronunciation.

These authors agree that any learner with normal physiological equipment will have a pronunciation learning ability which is independent of any need for instruction or other external interference. They acknowledge that adults do have some disadvantages compared with children when learning to pronounce a second language. But the learning skills they develop can compensate for the abilities which have been reduced, so that adults are at no real disadvantage when learning to mimic new sounds if provided with a suitable model. A suitable model for pronunciation learning would include the full range of verbal patterns within the selected styles of the target language.

Newmark and Reibel⁵⁹ argue that if the learner is provided with enough instances of the language in use he will not need to have analysis and generalization about those wholes made for him. The teacher's role is to ensure that the materials are graspable as usable items by the learner. The student can analyse and discover the rest.

This claim seems to be most relevant for learners living in an environment where the target language is spoken natively. There are innumerable cases of such learners acquiring good pronunciation through their own analysis, practice and

discovery, making progressive approximations to native-like accuracy, and with little or no formal practice in the sounds of the target language. For these learners it is reasonable to maintain that any difficulties encountered can be overcome simply with more and better exposure to the target language in use.

For learners living in their native environment with very limited opportunities for functional practice in the target language, Stevick's claims about the role of learner attitudes in pronunciation learning have direct relevance. Without adequate opportunities for developing good listening comprehension of the sounds of the target language, these learners are dependant on the classroom experiences planned by the teacher for developing listening comprehension and for practising the sound patterns.

Stevick⁶⁰ has successfully argued that the teacher of pronunciation needs to create a non-judgmental atmosphere in the classroom so that students are free to mimic new sounds without being made to feel that they sound strange when they mimic well, and without becoming anxious about the process of making the sound. The teacher should make it easy for the students to find out for themselves how their efforts compare with the pronunciation standard for the course.

So a suitable model must do more than conform to and exemplify the phonetic standard which has been chosen for the course, and be timely with respect to the linguistic aspects of the student's readiness. It should also be spoken in a way which will reduce the student's barriers against sounding like a foreigner. This means that the teacher is engaged in building a relationship that will permit the student to change

either the way he sees himself or the way he sees foreigners, or both.

Stevick⁶¹ maintains that in such an informative, non-evaluative atmosphere students learn most of what they need to know. Any necessary information which is not acquired in this learning process can be provided by the teacher in brief, matter-of-fact statements addressed to the whole group. When pronunciation is taught in this way, information from articulatory phonetics is seldom needed, but it can be provided when the students are ready for it.

Stevick⁶² challenges the 'applied linguistics view' of pronunciation learning because of its almost exclusive pre-occupation with the linguistic side of the process. Students find out empirically that they can generally ignore certain vowel distinctions (for example, beat-bit) and still be easily understood in non-academic settings. On the other hand, certain word endings are vital (understanding is reduced if the glottal stop is substituted for final p,t,k.). So Stevick defends intelligibility as a practical objective of second-language learning.

Further, the largely internal work done by the student is more important than the teacher's explanations. Stevick's philosophy has a place for mimicry and for phonetic description. But it sees the learning of pronunciation as only one aspect of a total process, social in nature, which involves the whole learner and not just the speech apparatus and cognitive faculties.

Each of the authors considered in this section advocates the learning of pronunciation through regular contact with the target language in use. The main difference in

emphasis is between the objectives of intelligibility and native-like accuracy. While Stevick and Newmark and Reibel are concerned with how the learner can most efficiently attain intelligible pronunciation, Bailey and Strevens, the two other authors to be considered, are concerned to identify those learning experiences necessary to acquire native-like accuracy in a second language.

These authors agree that most people learn most of the elements of pronunciation easily anyway, but they diverge from Stevick and Newmark and Reibel on how residual problems should be treated. Bailey⁶³ focuses on two aspects of native-like pronunciation in English. He notes that dialectical differences in English are not so much differences in pronunciation as differences in which pronunciations are tolerated in which styles. Thus, according to Bailey, three styles are necessary when learning the pronunciation of the words months and government: a disambiguating, a platform and a casual style.

Secondly, to acquire a native-like accent in a second language, Bailey⁶⁴ notes that one must learn the use of those phenomena called 'mistakes' by laymen and 'late assimilatory and other rules' by linguists. In order to evaluate stylistic variation and to distinguish which errors are and are not native-like, pronunciation learners need regular contact with such styles and 'errors'. Learners will recognize various styles and idiomatic pronunciations if these are presented regularly. They also need guided exercises to practise the various styles and native-like 'mistakes'.

Meanwhile, Strevens takes up the challenge of those problems which, according to Newmark and Reibel, can be left to the student, and, according to Stevick, can be resolved with

matter-of-fact statements by the teacher. He maintains that a large part of the pronunciation-learning task can be achieved through exposure to a suitable model, using explanation, imitation and mimicry. But for those aspects of pronunciation which the adult learner does not readily acquire, Stevens⁶⁵ advocates the use of speech training and practical phonetics. His argument is that linguistically sophisticated adults can benefit from the deliberate use of drills and exercises in practical ear-training and phonetics. Whereas young learners will learn best through mimicry with speech-training games for interest and for special points of difficulty, but with no use of phonetics.

More specifically, Stevens⁶⁶ suggests three distinct teaching techniques to facilitate pronunciation learning:

1? instructions to imitate and mimic certain sounds, without further explanation.

2? speech training, the construction of special games and exercises to practise particular sounds, sequences of sounds, stress patterns, rhythm, intonation, etc.

3? practical phonetics including a) descriptions of the organs of speech, b) description of the articulation of sounds, c) descriptions of stress and rhythm, and d) ear training, that is, practice in auditory discrimination.

An essential aspect of Steven's recommendations is that teachers should receive sufficient specialized training to enable them to apply the maximum sophistication of pronunciation-teaching technique that is suitable for the readiness of the learners. Stevens⁶⁷ concludes that people who learn a second language can learn good pronunciation at any age. They will actually do so if the teaching to which they

are exposed takes account of the foregoing recommendations.

The criterion of native-like accuracy has provided a reference point for the discussion of the various factors which together account for differences in performance among learners when pronouncing a second language such as English. Yet it is also recognized that second-language learners, particularly those who do not live in country where that language is spoken natively, usually have little opportunity or need to acquire the finer details which distinguish native pronunciation. A more realistic objective for these learners is to acquire the general use of the second language, that is, intelligibility. The rationale provided in this section is concerned with both of these objectives: it provides for the limited time and opportunities available to most learners for functional practising, while proposing how learners can be provided with the means to acquire native-like pronunciation.

5.9.

CONCLUSION.

When assessing the pronunciation of non-native speakers of English, native-like accuracy should be the underlying criterion of judgment. But for students who have little contact with native speakers in functional situations, intelligibility should be the immediate objective of pronunciation learning.

According to the theoretical model of second language learning developed by Bailystok, individual differences in achievement can be attributed to differences in the efficiency with which the model operates for different people. That is, in order to develop intelligible pronunciation, students need to utilize the learning strategies, maximizing the efficiency of the learning processes.

A consideration of the role of affective factors in pronunciation learning suggests that an empathic capacity is characteristic of those learners who are most successful in pronouncing a second language: that is, a strong orientation towards the target culture facilitates the acquisition of those features which characterize native-speech. No doubt the teacher has a vital role in the classroom, creating a non-judgmental atmosphere in order to reduce the student's barriers against sounding like a foreigner. In this way, the objective of native-like accuracy can be provided for in addition to that of intelligibility.

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NOTES

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³David Abercrombie, Elements of General Phonetics. (Edinburgh, University Press, 1967), pp.95-102.

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⁷Rubin, pp.44-5.

⁸Rubin, p.45.

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¹⁰Bailystok, p.79.

¹¹Bailystok, p.79.

¹²Bailystok, p.79.

¹³Rubin, p.47.

¹⁴Bailystok, p.76.

¹⁵Rubin, p.49.

¹⁶Bailystok, p.81.

¹⁷Carroll(1966) in Rubin, p.44.

¹⁸C.A. Parish, "A Practical Philosophy of Pronunciation." Tesol Quarterly, 13, No.3(1977), pp.312-3.

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²¹Krashen and Selinger, p. 15.

²²Krashen and Selinger, p. 19.

²³Suter, p. 246.

²⁴Bailystok, p.71.

²⁵Bialystok, p.79.

²⁶Krashen and Selinger, p.20.

²⁷Bailystok, p.77.

²⁸Bailystok, p.79.

²⁹Bailystok, p.81.

³⁰Bailey, p.239.

³¹Bailystok, p.82.

³²Peter Strevens, "A Rationale for Teaching Pronunciation." ELT Journal, 28, No.3(1974), 183.

³³Suter, p.244.

³⁴Rubin, p.49.

³⁵Stevens, p.184.

³⁶Stevens, p.184.

³⁷Rubin, p.49.

³⁸Stevens, p.182.

³⁹Rubin, p.49.

⁴⁰Stevens, p.184.

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⁴⁴John H. Schumann, "Affective Factors and the Problem of

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⁴⁶P.F. McDonald and J.C. Sager, "Beyond Contextual Studies." IRAL, 16, No.3(1975), 22.

⁴⁷Earl W. Stevick, "Towards a Practical Philosophy of Pronunciation: Another View." Tesol Quarterly, 12, No.2(1978) 145.

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⁴⁹Taylor et al.(1969) in Schumann, "Affective Factors..." p.221.

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⁵²Guiora in John Schumann et al. "Improvements of Foreign Language Learning Under Hypnosis." Language Learning, 28, No.1(1978), 143.

⁵³Schumann et al. "Improvements...", pp.146-7.

⁵⁴Stevick, p.146.

⁵⁵Stevick, p.147.

⁵⁶Stevick, p.147.

⁵⁷Stevens, p.186.

⁵⁸Newmark and Reibel, p.149.

⁵⁹Newmark and Reibel, p.150.

⁶⁰Stevick, p.148.

⁶¹Stevick, p.148.

⁶²Stevick, p.149.

⁶³Bailey, p.237.

⁶⁴Bailey, p.239.

⁶⁵Stevens, p.189.

⁶⁶Stevens, p.186.

⁶⁷Stevens, p.189.