

**TRANSFER AS A COGNITIVE PROCESS
IN THE ACQUISITION OF A THIRD
LANGUAGE**

by

Maria Manuela Romano Julien

TRANSFER AS A COGNITIVE PROCESS
IN THE ACQUISITION OF A THIRD LANGUAGE

by

Maria Manuela Romano Julien

Bachelor of Arts,
Universidade Eduardo Mondlane, 1983,
Maputo, Mozambique

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Master's Degree
in Applied Linguistics.

Department of Linguistics
in the Graduate School
Southern Illinois University
at Carbondale
July, 1990

ABSTRACT

This study is designed to ascertain whether speakers of two typologically and genetically unrelated languages who are acquiring a third language (L3), benefit from the fact that their second language (L2) is typologically, genetically and areally related to their L3. The study questions how the two previously known languages affect the cognitive processes employed by these learners, and in particular, how they "compete" in the process of transfer.

The sample was drawn from a population of Mozambican secondary school students attending Grade 9, who had had four semesters of English. Sixty-three subjects, aged 13 to 20, were selected according to three grouping characteristics: Group 1 consisted of speakers of Tsonga (L1) who were proficient in Portuguese (L2); Group 2 consisted of speakers of Tsonga (L1) who were not proficient in Portuguese (L2); and Group 3 consisted of monolingual speakers of Portuguese (L1).

Two sets of instruments were used to obtain information about the subjects' language background, about their proficiency in Portuguese (L2), and to elicit their English proficiency.

An ANOVA model for a repeated measure design was used to analyze the data, and significant differences were found in the subjects' performance (type of errors) in English.

To my parents and brothers

I thank you for giving me the incentive that brought me this far. Without your support this thesis would not have been possible.

I love you all!

ACKNOWLEDGEMENTS

I wish to thank the chair of my thesis, Dr. Paul Angelis for his guidance and support. I would also like to extend my thanks to the members of my thesis committee, Dr. Lise Winer, Dr. James Redden, and Dr. Glenn Gilbert for their assistance and helpful comments on my work. I would like to express my gratitude to all of them for being supportive and encouraging when I most needed it.

I am most indebted to Dr. William Humbane, my former professor and Head of the Department of Modern Languages at the Eduardo Mondlane University, who has always been a model to me and to whom I owe the success of the collection of the data for this thesis.

A very special thanks goes to my fiancée, who gave me moral support and provided conditions that facilitated the data collection.

Further, I would like to thank Dr. Mateus Katupha, and friends like, Eric, Leyla, Reggie, Graça, Marcelo, and Nancy, who, despite being busy with their own studies and work, found time to write me encouraging letters, and give me helpful suggestions and comments on my work.

I am also grateful to Douglas Passanissi, the Fulbright scholar who substituted for me in Mozambique during the first two years of my absence.

My thanks are also due to Fulbright (USIA) for granting me a scholarship for the academic years of 1987 through 1990, during which I worked toward my masters' degree.

I am especially grateful to the students who were the subjects of this study. Without their cooperation in recording their developing interlanguages, and in answering the written tests, this work would not have been possible. I must also express my gratitude to the principal of their school and to their English teachers for their collaboration and for the special provisions which they willingly made for me to collect the data.

Finally, I thank all my informants, especially Mr. Felix Khosa, Armino Ngunga and Pedro Afido who eagerly and tirelessly clarified my doubts about the structure of Tsonga and other Bantu languages spoken in Mozambique.

TABLE OF CONTENTS

DEDICATION.....	i
ACKNOWLEDGMENTS.....	ii
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
CHAPTER 1.	
INTRODUCTION.....	1
1.1. The Mozambican Linguistic Situation.....	4
1.2. Literature Review.....	7
A. Theories of Second Language Acquisition	
Theory of Transfer.....	7
Theory of Contrastive Analysis.....	10
Theory of Creative Construction.....	13
Theory of Pidginization.....	15
B. The Notion of Language Distance.....	19
C. Other Cognitive Strategies.....	34
CHAPTER 2.	
RATIONALE.....	37
2.1. Grammatical Features being studied.....	45
HYPOTHESES AND RESEARCH QUESTIONS.....	64
CHAPTER 3.	
METHODOLOGY.....	69
3.1. Subjects.....	69

3.2. Instruments.....	69
3.3. Procedure.....	70
3.4. Data Coding.....	71
3.5. Data Analysis.....	72
CHAPTER 4.	
RESULTS	73
4.1. Findings.....	73
4.2. Discussion.....	84
CHAPTER 5.	
CONCLUSION.....	101
SUGGESTIONS.....	105
BIBLIOGRAPHY.....	114
APPENDIX A. Written Questionnaire.....	129
APPENDIX B1. Written Portuguese task.....	131
APPENDIX B2. Written English task.....	135
APPENDIX B3. Oral task in Portuguese and English.....	139
APPENDIX C. List of error types produced.....	140
APPENDIX D. Duncan's test for error typers 2 and 6.....	142
APPENDIX E.	
FOOTNOTES.....	130
VITA	

LIST OF TABLES

TABLE	PAGE
1. Means and Standard Deviations for comparatives.....	74
2. Analysis of variance in the frequency of errors produced in the comparative construction.....	74
3. Means and Standard Deviations for articles.....	80
4. Analysis of variance in the frequency of errors produced in the use of articles.....	81

LIST OF FIGURES

FIGURE	PAGE
1 The process of linguistic simplification and reconstruction.....	28
2 Cognitive strategies.....	34
3 The overlap among languages.....	41
4 A feature chart of the article system.....	49
5a Oral error type by proficiency interaction.....	77
5b Written error type by proficiency interaction...	78
6 Task by error type interaction.....	79

CHAPTER 1

INTRODUCTION

In the past two decades linguists have advanced several theories of Second Language Acquisition (SLA); the monitor model (Krashen, 1977, 1978); the Interlanguage theory (Selinker 1969, 1972); theories based on Linguistic Universals, e.g., the theory of markedness (Hyltenstam, 1982; Zobl 1983, 1984); the theory of Acculturation/ Pidginization (Bickerton, 1971, 1973; Schumann, 1978); the Cognitive theory (McLaughlin et al. 1983; Hulstijn and Hulstijn 1984), and others. All these theories presuppose that second language learners employ a series of "cognitive strategies"(1).

Language transfer (2), a strategy that will be analyzed in depth in this study, has been a major or minor component of a number of SLA theories for quite some time (Lado, 1957; Kellerman, 1977; Gass 1979, 1984). Other strategies such as inference, avoidance, simplification, overgeneralization, will, because of their close relationship to transfer, also be taken into consideration in this study.

The purpose of the study is to investigate, within a cognitive perspective, the linguistic phenomena of transfer. More specifically, our attention will be directed to transfer in a multilingual context, in this case the languages spoken in Mozambique. We will address the nature of the transfer of mother tongue (Tsonga, a Bantu language

spoken in the Southern region of Mozambique), and second language (Portuguese) in the acquisition of a third language (English) by Mozambican students.

As mentioned above, there is an enormous body of research on the role of transfer in second-language acquisition. However, little has been done in regard to the acquisition of more than two languages. An underlying assumption in our work is that the process of acquiring a third language is qualitatively different from that of acquiring a second language, and, therefore, the two processes should not be lumped together under the general name of Second Language Acquisition, as has been the practice. This thesis is an attempt to provide some evidence to support this hypothesis.

This thesis will also deal with the issue of the relationship between second-language acquisition (SLA) and pidginization-creolization-decreolization (PCD). Both SLA and PCD examine the process of acquiring language. In SLA, there is the process of developing the interlanguage to be like the target language. In PCD, there are the processes of developing pidgins and creoles, as well as the process of decreolization. The patterns which occur in interlanguages, pidgins, and creoles show similarities. These similarities have lead researchers to examine the two fields together in an attempt to gain more knowledge about cognitive processes employed by language learners.

The rest of this chapter provides a brief description of the Mozambican linguistic situation, followed by an examination of background literature concerned with the processes underlying language acquisition. The second chapter presents the rationale for the study and the hypotheses being investigated. The third chapter explains the methodology employed to obtain and analyze the data. The fourth chapter presents the results followed by the discussion of the findings. The final chapter presents the conclusion and suggestions for further research.

THE MOZAMBIKAN LINGUISTIC SITUATION

For a better understanding of this study and its possible contribution to areas of linguistics, education, language teaching, language planning, and language policies in Mozambique, a brief description of the linguistic situation in that country is both relevant and appropriate.

Mozambique is a multilingual country, where thirteen (this number is controversial) Bantu languages are spoken by approximately 98.8%(3) of the population. Portuguese, a foreign language imposed by colonization, is the only official language and the medium of instruction used in the whole country from grade one through university. English is taught, as a foreign language, at secondary school level for three years. The language patterns of the majority of Mozambicans can be characterized as follows: they are brought up in Bantu-speaking homes with parents who, in a vast majority of cases, are speakers of one or more Bantu languages. Therefore, the language input of the children is restricted to one or more Bantu languages. Gradually the Portuguese language enters into their lives through contact with Portuguese speaking people, through the media (almost all newspapers and magazines are written in Portuguese; most radio and television programs are also broadcast in Portuguese) and later on, at approximately the age of six, through the education system. There is also a minority of

children, approximately 1.2%, whose mother tongue is Portuguese. This group can be subdivided into those who are monolingual, and those who, besides Portuguese (L1), also speak a Bantu language.

In any country, language policies are shaped by historical, political, cultural, and economic factors. The functions that the different languages are put to in a multilingual society grant different status to each of them. In Mozambican society all the native Bantu languages, as well as Portuguese and English have important roles to play. Although Portuguese is still the only official language, the Bantu languages are used extensively in the media, and for daily communication in the homes of the majority of Mozambicans. One of the aims of the developing language policy in Mozambique is to establish a system of complementarity between the native languages and Portuguese, rather than dominance of the latter over the former as has been the case to the present moment.

The geographical location of Mozambique renders the English language an important and indispensable "tool" for guaranteeing communication between Mozambique and its neighboring countries at all levels of science, culture, technology and politics. The importance of English as an international language also makes the teaching of that language in Mozambican schools imperative.

A more detailed discussion of the linguistic situation in Mozambique goes beyond the scope of the present study. Nevertheless, it is our contention here that, while sociolinguistic, economic and political issues can contribute to language planning, consideration of psycholinguistic issues is relevant as well, especially with reference to language teaching. Studies like this, that attempt to "uncover" generalizations about the language acquisition process of Mozambican learners can provide a basis for the development and implementation of such linguistic decisions.

LITERATURE REVIEW

There is a frequent assumption not only among language teachers but also among theoreticians, that when attempting to communicate in a second language, learners often transfer elements of their native language onto the speech patterns of the language being learned. With this in mind, I posed the following questions: What happens if the learners are bilingual or even multilingual? What factors determine such transfer? How is the system of the individual languages organized and stored in the minds of those speakers?

This study deals mainly with the first two questions. The analysis and discussion of the results of our investigation will be elaborated within the framework of a theory of Transfer (T). The study will take into consideration issues related to the theory of Contrastive Analysis (CA), the Theory of Creative Construction (CC), the theory of Pidginization (P), and the notion of Language Distance (LD).

THEORY OF TRANSFER

There are two claims about Transfer theory. One refers to the general expectation that new forms of learning do not go on independently of what the organism learned before. The second claim expresses the expectation that the learning of certain specific and identifiable elements in Task B is facilitated (or hindered) by the previous learning of

certain specific and identifiable elements in Task A.

Support for this claim is provided by Gass (1979).

Gass considers language transfer as a subset of a more general process, implying that patterns of native language (at all levels of linguistic structure), including both forms and functions of elements are superimposed on the patterns learned in the second language. She proposes a model of language transfer that predicts under which conditions transfer is most likely to occur. The model includes notions of language universals, language distance, and surface language phenomena.

Ellis (1985b) discusses the role of L1 transfer as a learner strategy. According to him the learner uses strategies for both sorting the L2 data into a form in which it can be stored and for making use of knowledge already in store. As McLaughlin (1978) and Taylor (1975) have argued, the use of L1 in learning an L2 is a manifestation of a very general psychological process --- that of relying on prior knowledge to facilitate new learning.

Corder (1978a) also views transfer as a learner strategy. He suggests that the learner's L1 may facilitate the developmental process of learning an L2, by helping him or her to progress more rapidly along the "universal" route when the L1 is similar to the L2.

As Kellerman (1977) says,

...no-one (except perhaps Dulay and Burt, 1972, to some extent) has challenged the notion that learners of second languages are prone to incorporating native language (NL) features in their attempted target language (TL) production, leading to a particular class of errors easily ascribable to their source by means of a bilingual comparison of the learner's attempted TL utterance and its equivalent in the NL. (p. 58)

In sum, transfer is one of several strategies which learners apply to the problem of how to express themselves in the TL. There have been a number of other stimulating investigations and discussions on different types of transfer (Faerch, 1984; Kellerman, 1977; Wode, 1982), on the linguistic regularities governing transfer (Felix, 1980; Zobl, 1980) and on the influence of learners' perception of structural similarities, typological distance and markedness (Jordens, 1977, 1980; Jordens and Kellerman, 1981; Kellerman, 1977, 1979; Sharwood Smith, 1979; Zobl, 1980). There is no doubt that transfer remains one of the major factors considered to shape the learner's interlanguage (4) competence and performance. Quoting Kohn (1986),

As it stands, the analysis of transfer - like the mythological hydra - has multiplied its strength with a crop of freshly sprouted heads and is probing new and promising directions. (p. 21)

CONTRASTIVE ANALYSIS

Within the behaviorist framework, second-language learning consists of overcoming the differences between the first and second language systems. Lado (1957) viewed the problem in the following way "...those elements that are similar to his native language will be simple for him, and those elements that are different will be difficult" (p. 2). According to this contrastive viewpoint, there are varying levels of difficulty corresponding to varying degrees of difference between language items. In order to provide a systematic basis for judging these various levels of difference and, therefore, to predict learning difficulty, Stockwell, Bowen and Martin (1965) drew up a scheme. They provided a "hierarchy of difficulty", derived from a CA of English and Spanish, based on comparing what linguistic choices the learner must make both in his native language and his target language. Linguists find this kind of scheme complex and difficult to apply; and furthermore, it does not capture the many types of difference that might exist between two languages. For example it does not account for partial correspondence(5) between two languages. According to CA, the structures that partially overlap between the two languages, but not completely, cause more difficulty to the language learner than those which are completely different.

Later views of CA became subsumed within the wider undertaking of Error Analysis (EA). Errors are seen as evidence for learners' developing systems and can offer us insights into how they process the data of the new language. It is assumed that if learners are actively constructing a system for the TL, they may sometimes have incorrect notions about it, which may be a result of transferring rules from their L1 or by direct reference to the TL itself. In the sixties Corder (1967) already saw the "making of errors" as a strategy, evidence of learners' internal processing. Taylor (1975) found transfer errors to be more frequent with beginners than with intermediate students. The explanation he gives is that the beginner has less previous TL knowledge to draw on in making hypotheses about rules, and might, therefore, be expected to make correspondingly more use of his L1 knowledge. Jakobovits (1970) says that prior learning interferes with subsequent learning at least initially, until the habit strength of the second set of responses is such that the earlier set no longer interferes.

Over the years, linguists like Schachter (1974), Swain (1975), Perkins and Larsen-Freeman (1975), Tarone, Frauenfelder, and Selinker (1975) began to question the validity of the assumption that errors are reliable indicators of difficulty and they began to explore the possibility that the more difficult aspects of learning stimulate the learner to rely on extra resources such as

avoiding using those particular structures in order to avoid errors. It is now agreed that "differences" and "difficulty" are not identical concepts. There is no strong reason to believe that differences in the structure of the two languages, correlate with the difficulty of the psychological processes which learners undergo when learning a new language.

In discussing CA, Wardhaugh (1970) proposed a distinction between a "strong" and a "weak" version of the theory. The strong version states that CA can reliably predict difficulty and errors. It claims that all L2 errors can be predicted by identifying the differences between the target language and the learner's first language. This strong form of the hypothesis was common before research began to show that many of the errors produced by L2 learners could not be traced to the L1. Currently, this strong version of CA has been virtually abandoned, since its claims are not supported by the evidence. The weak version is, however, generally considered to be more acceptable, because, after the errors learners actually make are observed, CA can explain the ones which are due to transfer. This weak form of the hypothesis claims only to be diagnostic. According to the weak hypothesis, CA needs to work hand in hand with Error Analysis. Implicit in this statement is the assumption that not all errors are the

result of interference, so the causes for the other errors which are not due to interference must also be analysed.

CREATIVE CONSTRUCTION

The main evidence against CA came from the analysis of learners' errors. In the early '70s, researchers like Dulay and Burt (1972; 1973; 1974) began to attack the notions of interference and habit formation in second-language learning. They studied the acquisition of English by Spanish-speaking children, and compared their "interference errors" with their "developmental errors." The conclusion they arrived at was that "Creative Construction", i.e., the use of active strategies to figure out the L2 system, seemed to be a more powerful process than habit formation, both in L1 and in L2 acquisition. They proposed that, at least to prepuberal children, L1 and TL learning processes are qualitatively similar and mutually independent so that TL errors will not be caused by transfer from L1. Instead, Dulay and Burt reinterpret errors whose formal cause is the NL as "developmental", i.e., similar to "errors" made by children acquiring their L1. They describe the kind of errors that are considered interference errors by other linguists as "interference-like goofs", and claim that linguistic data ought not to be taken just at their surface value. In their work, they tried to show that these errors do indeed have their counterparts in the literature of L1

acquisition and are in fact examples of such processes as generalization of the linguistic rules of the TL.

Other research does not support Dulay and Burt's findings (Littlewood, 1984; Flick, 1980; Lott, 1983; Grauberg, 1971). Littlewood (1984), for example, found that between one-third and one-half of learners' errors are due to transfer from the L1. Littlewood (1984) states,

We should note, however, that it is not necessary to see transfer as inextricably linked to behaviourist theories of habit-formation. It can also be seen as part of a process of creative construction: the transfer of rules from the mother tongue may be one of the learner's active strategies for making sense of the second language data. (p. 21)

In a later study, Dulay and Burt (1975) suggested that there is transfer in L2 acquisition, but it is not transfer of L1 surface structure. Transfer is viewed by them as a learning process in which more abstract universal principles are transferred. As we have seen, for advocates of the theory of Creative Construction the general principles of reconstructing primary linguistic data used in L1 acquisition are also evident in L2 acquisition.

It is not possible to give priority to the CC hypothesis over the CA analysis on formal grounds alone. Research involving an examination of both written and oral data and an evaluation of the psychological basis of formal causes of errors, represents a necessary minimum requirement for supporting hypotheses as to the source of errors.

PIDGINIZATION

There has been, since the turn of the century, increasing interest in comparing SLA and PCD (pidginization, creolization and de-creolization) with the objective of finding similarities between them (Bickerton, 1977, 1981, 1983, 1984; Schumann, 1978, 1981a, 1981b, 1982, 1983; Gilbert 1979, 1981; Anderson, 1983). Bickerton, for example, has used an SLA-based model to explain the development of, and the variation in, pidgins and creoles. Bickerton's model is based on his often quoted statement "Pidginization is second-language learning with restricted input, and ...creolization is first-language learning with restricted input" (Bickerton, 1977, p.49). Thus, rather than seeing an analogy between early second-language acquisition and early pidginization, as Schumann (1978) initially did, Bickerton (1981) and Schumann (1982) argued for identity of process, that is to say, that SLA and Pidginization are the same process.

Anderson (1981) did a careful comparison of Bickerton's work based on 24 speakers of Hawaiian Pidgin English (Bickerton and Odo 1976) and Schumann's research on Alberto (1978), and reached the conclusion that there were a great number of similarities in several linguistic aspects. This finding supported the suggestion that pidginization is characteristic of all early second-language acquisition. Andersen (1983) later extended this idea by stressing to a

greater degree the role of internal processing mechanisms. He distinguished "nativization" and "denativization" processes. Nativization occurs as the learner makes the input conform to an internalized view of what constitutes the second-language system. As he states,

Creolization, pidginization, and the creation of a unique inter-language in first and second language acquisition in early stages of acquisition share one attribute - the creation of a linguistic system which is at least partly autonomous from the input used for building that system. (Andersen, 1983, p. 11)

Denativization consists of accommodation to the external system. During this process, the learner adjusts the internalized system to make it fit the input:

When circumstances cause the learner to reconstruct his inter-language to conform more closely to that of the input, he must in effect dismantle parts of his 'native' system (the system that he constructed previously or that he is in the process of constructing)...thus decreolization, depidginization, and later stages of first and second language acquisition constitute types of 'denativization'. (Andersen, 1983, p. 12)

Andersen (1981) summarizes his position as follows: "Researchers in pidgin and creole studies and researchers in second-language acquisition are really studying the same phenomenon, each from a different perspective." (p. 193)

However, Gilbert (1981), who also compared the work of Bickerton with that of Schumann, reached a different conclusion. He suggests that there is an alternative

hypothesis that needs to be considered before accepting the identity of pidginization and early L2 acquisition. This is the hypothesis that the characteristics Schumann observed in Alberto's speech are due to transfer from Spanish. He further argues that, if that is the case, the pidginization hypothesis was unnecessary. He claims that the only strategy necessary in this process is transfer.

This renders Schumann's pidginization hypothesis unnecessary, since pidginization is now seen to be a subcategory of second-language acquisition generally, with a strategy of transfer being used throughout.
(Gilbert, 1981, p. 210)

Earlier (1979), Gilbert had provided one criterion to help in judging whether an interlanguage pattern was the result of transfer or nativization. He stated (1979), "The real question is: what kind of evidence is critical in deciding between transfer and pidginization?" (p. 2). The criterion consists of identifying positively defined, shared features that are demonstrably unrelated to either Ls [the source or native language] or Lt [the target language]. That is, if structures occur in the interlanguage which are like those occurring in PCD, and unlike those occurring in either the native language or the target language, then one can say that nativization is occurring.

Fitzgerald (1980) in his thesis also discusses the question of transfer as an alternative explanation to nativization. He points out the existence of controversy

over the presence of transfer from the native language as an alternative explanation to nativization. As he explains, this controversy is due to the fact that much of the SLA-based data in nativization research has come from native speakers of the Romance languages, and many of the interlanguage patterns that are similar to patterns in pidgins and creoles are also similar to patterns found in the Romance languages; thus it is not clear whether nativization or transfer is occurring.

Despite this controversy researchers seem to agree that:

- 1) Both pidgin and creole-like structures and native language-like structures occur in interlanguage.
- 2) Transfer from the native language occurs at some times.
- 3) It is not always possible to disentangle whether an interlanguage structure comes through transfer from the native language, nativization, or some other process.

More research in this area needs to be done to provide a clearer picture of the process of language acquisition.

THE NOTION OF LANGUAGE DISTANCE

One of the language transfer factors considered in this study is the degree of similarity between the language being acquired and the languages already known by the learners.

Linguistic typology presupposes (1) that languages can be compared with one another in terms of their structures,

implying that there are some universal properties of language (i.e., a set of general principles that applies to all languages) that provide the basis for comparison, and (2) that there are differences among languages. Based on this assumption, a combination of the notions of language universals, and linguistic and genetic typologies will be employed in the analysis and assessment of the distance between the languages involved in this study.

There is some direct and indirect support for the argument that the degree of L1 interference is proportionate to the degree of typological similarity between L1 and TL. Sjöholm (1976) in a study conducted in Finland(6) found that Finnish-speaking Finns made errors in English that could not be traced to Finnish but rather to Swedish (the second language of Finland) or English itself, while Swedish-speaking Finns' errors reflected Swedish, but not Finnish (their second language). In other findings reported by Schachter et al. (1976), bilingual speakers of French and Arabic rejected Arabic-like erroneous English relative clauses as ungrammatical. Schachter et al. offer an explanation which claims that the learners' experience of English shows them that the relatedness of English to French is greater than English to Arabic - hence a suspicion of Arabic-like English structures.

Yet another example provides more support for this argument. "Cocoliche" is the version of Spanish spoken by

Italian immigrants to Argentina to communicate with native Argentinians. Whinnom (1971), studied the linguistic behavior of this community and found that although Spanish lexical items should have been the first to be assimilated into the Italian morpho-syntactic system, this did not occur where Italian and Spanish were sufficiently similar not to hinder communication (e.g. amico-amigo). Kellerman (1977) suggests that the high degree of mutual intelligibility between Italians and Argentinians is not due to any inherent ability on the part of speakers to make typological comparisons in the way a linguist can. According to him, similarity has to be sensed through contact, instruction and learning. The learner will gradually realize that Italian and Spanish are similar or that English and Finnish are not, and eventually he or she will see that in certain areas such as elements of syntax or lexis his of her L1 and the TL behave identically or nearly enough so. The learner's problem then is to be able to recode the surface structure of the L1 so that it appears to be compatible with the surface constraints of the TL systems as he or she sees it. Kellerman (1977) uses the term "projection" to label the process of extrapolating from the L1 to produce a supposed TL sentence on the assumption that the two languages are the same. As he says, projection can be a conscious or subconscious process, and it is essentially creative, since the learner is hypothesizing about new cases on the basis of

what he or she already knows. Kellerman (1979, 1983) invoked the concept of markedness(7) to predict when transfer is likely to occur from the L1. More marked structures in the learner's first language were predicted to be less transferable than regular and frequent forms. Zobl (1983, 1984) proposed that one reason for transfer from the first language is that the second-language rule is obscure. There are two main reasons suggested for this obscurity: (1) the second language is typologically inconsistent in that it violates a universal implicational pattern, or (2) the rule is itself typologically variable, so that there are a large number of possibilities. In either of these cases, learners are likely to fall back on their L1 and so L1 influence will be found in the interlanguage. He further noted that, while there are exceptions that violate the constraints of language universals where marked features are transferred, the usual pattern is for second-language learners at all stages of development to avoid transferring marked first-language rules.

Eckman (1977, 1985) has also argued that transfer occurs principally where the L1 feature is unmarked and the second-language feature is marked. According to Eckman's Markedness Differential Hypothesis, those areas of the TL that will be most difficult for L2 learners are those that are both different from L1 and relatively more marked. It follows, for example, that faced with an L2 in which the use

of articles to express the notion of specificity/ nonspecificity is marked, learners from a language that does not make use of articles have to go from a language that has an unmarked feature to one that has a marked feature, and will, therefore, experience some difficulty, and transfer that unmarked feature.

Kumpf (1982) argued that markedness considerations could lead to the appearance of forms that were not present in either the L1 or the L2. She reported evidence in the interlanguage of L2 learners that suggested that the tense/aspect system did not correspond to either the L1 or the TL. Kumpf speculated that in such cases the interlanguage reflects the learner's capacity to create unique forms consistent with universal principles of natural languages.

There is evidence for the claim that the determining factor in the acquisition of interlanguage syntax is markedness as defined within Universal Grammar Theory. Several researchers have applied UG theory to transfer problems (Mazurkewich 1983, 1984; Flynn, 1983; Masny 1987). Flynn (1983) among other researchers, has come to the conclusion that it is not surface features of the two languages that predict when transfer occurs, but more profound and abstract universal principles of acquisition. She argues that when the value of a parameter is set in the first language it may or may not need to be revised in the

second language acquisition process depending on the correspondence of the two languages. Thus, Universal Grammar Theory does not treat transfer as a matter of structural comparison of rules as is the case in CA, but in terms of how the rules exploit the same underlying principles. Cook (1985) has pointed out, however, that this comparison needs to be supplemented by an account of how first and target grammars deviate from core grammar. For example, English and Portuguese can be seen to be similar in terms of the core parameter of the formation of the comparative degree of adjectives, but their relationship also needs to take into account the more peripheral rule that monosyllabic adjectives in English are formed by adding the suffix -er to the adjective.

At the core, the theory provides a common measuring stick for two grammars; as we move to the periphery, the stick becomes less appropriate and more attention has to be paid to other factors than Universal Grammar. (Cook, 1985, p. 14)

To summarize, Universal Grammar Theory offers an alternative to CA in that the theory postulates a set of deep principles common to all languages and fundamental to both first and second-language acquisition. Both the typological approach and the Universal Grammar approach have generated useful predictions about the nature of interlanguage and the interference of the first language. The bulk of the evidence to date suggests that language

acquisition proceeds by mastering the easier unmarked properties before the more difficult marked ones. However, there seem to be exceptions in the early stages of acquisition and in cases where both L1 and TL constructions are marked.

As reported earlier in this chapter, when analysing the distance between languages, the fact that difficulty does not always correlate positively with magnitude of the distance between the languages under investigation must be taken into consideration. Lee (1968) reported that he experienced little interference from his mother tongue, English, when learning Chinese, and suggests that this was because the structures of the two languages were so different. It is clear that language interference occurs in certain contexts, but not in others. Wode (1976, 1981) states that interference appears to be more likely when there is a "crucial similarity measure" , i.e., a certain degree of typological similarity, between the source and target languages. The nature of this "crucial similarity measure" has not been specified. Nevertheless, this mental process of "measuring" the similarity between languages has proven to be a very complex task which requires balancing psychological and linguistic factors. Despite the difficulty of defining this "crucial similarity measure", its importance as a means of predicting or explaining, with greater accuracy, when interference takes place, has been

recognized (Wode, 1981; Zobl, 1979). It has become clear that transfer strategy is the result of sensing when the TL can be expressed in a way already at the learner's fingertips. A developing sensitivity may relate to the commonly observed phenomenon of learners making errors which seem to owe their origin to another foreign language(8). The learner is capable of becoming sensitive to the fact that TL_a is closer to TL_b than the NL. "It would then come as no surprise to find English learners of, say, a Romance language who already have another Romance language, using the latter to project to the former" (Kellerman, 1977, p. 95).

Support for this claim comes from Schachter et al (1976), Sjöholm (1976), and Ringbom and Palmberg (1976), who also examined the Finnish situation and discovered that the Finns are also likely to be aware of the similarities between English and Swedish. Therefore, comparatively many of the errors among the Finns bear witness of (sic) Swedish influence. The Swedes made relatively many errors attributable to Swedish and almost none attributable to Finnish.

Each of the theories and concepts mentioned above plays an important role in explaining how learners acquire other languages besides their L1.

Some linguists have designed models that try to integrate several of these theories. Flynn (1987) proposes a parameter-setting model of Universal Grammar (UG) for L2

acquisition that integrates both CA and CC within one explanatory account. According to her, L2 learners use principles of UG employed in L1 acquisition in the construction of the L2 grammar. This aspect of the model is consistent with CC; however, when values of parameters associated with the principles of UG differ between the L1 and the L2, learners assign a new value to adhere to the values for the new target language. The L1 experience counts in assigning the new parametric value. This aspect of the model is consistent with traditional CA.

Corder (1978b) views second-language learners' interlanguage not as one continuum stretching from the mother tongue to the TL, as Selinker (1969, 1972) proposed, but as consisting of two types of continua: the first envisages the learner as engaged in a process of progressively adjusting his mother tongue system to approximate the TL. He calls this process PROGRESSIVE RECONSTRUCTING. In this sense, progressive reconstructing is similar to 'restructuring' (Stauble 1978; Lightbown 1984; Ellis 1985a; MacLaughlin 1987) whereby the new forms are accommodated by a restructuring of the existing form-function system to one that more closely approximates that of the target language. Restructuring can also be seen as part of the 'denativization' process (Andersen 1981), whereby learners adjust the internalized system to make it fit the input. The second continuum perceives learning as a process

of increasing complexification of the interlanguage and resembles in some respects the acquisition of L1. He calls this process RECREATION. He further suggests that in learning a second language we neither start from scratch nor from the fully complex code of our mother tongue. The starting point may be some basic linguistic system from which all language development starts. He also suggests that we move down what he calls a "scale of simplification," i.e., the continuum from peripheral to core grammar, before starting to build up again, and how far down the scale we move depends upon the relatedness of the mother tongue and the target language. As he points out (1978b) "...economy of effort suggests that we do not necessarily always have to strip down to bare essentials, but only so far as to reach a point at which the two languages begin to diverge structurally" (p. 90). It could be concluded that, in the case of related languages such as Portuguese and English the learner would not have to go very far down the "scale of simplification", but in the case of a speaker of a Bantu language learning English the process may involve a good deal of simplification and reconstruction. Figure 1 is a visual representation of how I interpret this theory with respect to the languages in question:

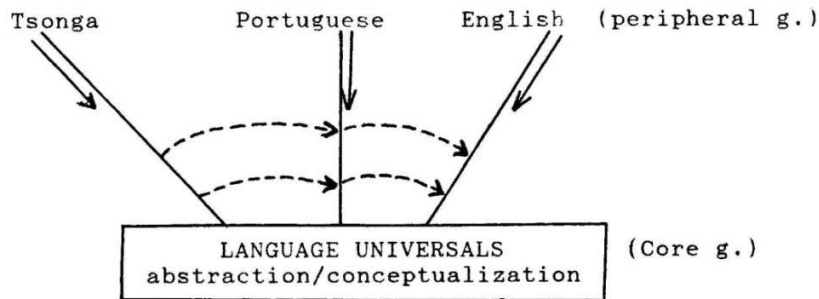


Figure 1
The process of linguistic simplification and reconstruction

The arrows pointing downwards represent the process of "moving down the scale of simplification", and the broken arrows pointing sideways represent the process of reconstructing. The broken arrows mean that reconstruction is not an even process, i.e., the learner is constantly 'progressing' and 'regressing' while he or she tries to figure out how the TL system works.

The arrow that goes from Tsonga to Portuguese is longer than the one that goes from Portuguese to English, indicating that the distance between the first two languages is larger than the distance between the latter two languages.

Let us take as an example the use of articles to express specificity and nonspecificity in English and in Portuguese, and the absence of such a device in the Bantu languages. The concept of specificity and nonspecificity exists in all languages of the world; however, it is

linguistically realized in different ways in each language. In English the article "the" is used to express specificity (for any number, and gender), and the articles "a/an" are used to express nonspecificity. Portuguese has a very similar way of realizing this concept. In Portuguese there are four articles to express specificity (o, a, os, as) and four to express nonspecificity (um, uma, uns, umas). In Tsonga, a Bantu language, no article is used to express this concept. It seems that all nouns are nonspecific, and whenever the need to express specificity occurs, a 'weak' demonstrative (e.g. leri/leriya) equivalent to "this/that" is used. Below is a representation of how the concept of specificity/ nonspecificity is realized in the three languages:

	specificity	nonspecificity	
Portuguese	o, a, os, as	um, uma, uns, umas	
English	the	a/an	some
Tsonga	Ø	Ø	-n'wana/-n'we

My interpretation of Corder's theory applied to this situation is that the distance among these languages at the conceptual level is shorter than it is at the surface level (level of realization), so the Bantu speaker needs to go deeper (simplification) to a stage in which the concept of specificity/nonspecificity is 'closer' among these languages (the universal core). The degree of simplification for a

speaker of Portuguese learning English is smaller than that of a Bantu speaker learning English because the use of articles to express specificity is relatively similar in the two Indo-European languages. On the basis of what is called, in CA, convergence phenomena, it could also be speculated that the task of Portuguese speakers is facilitated because the eight forms used to express specificity/nonspecificity in Portuguese are reduced to four in English. For the Bantu speakers the task of learning to use articles correctly would be more difficult, because the reverse happens, i.e., they have to acquire a completely new surface structure that is absent in their languages, and negative transfer is more likely to occur in this group of learners than in a group of Portuguese speakers.

Jordens (1977) and Kellerman (1977) advocate an approach to L2 acquisition whereby transfer is not "automatic" but depends crucially upon native speaker "judgments" about what, in his or her language, is transferable, and about the distance between the target language, on the one hand, and any previously learned language, on the other. On the basis of judgments like these, the learner may or may not choose to use a given source language as the basis for constructing utterances in the TL. This view emphasizes internal reorganization prior to transfer, that is, one would have to hypothesize a

block transfer would have to be effected according to which languages are involved, since the likelihood of the grammatical structure being used as a basis for transfer will depend in part on target-source language distance, and in part on "familiarity" with the source languages available.

Despite the extent of the literature on Transfer, Contrastive Analysis, Creative Construction, Pidginization, and Language Distance, the number of studies addressing transfer from previously known languages besides a single L1 is limited. The studies mentioned above provided the background for this study. I believe that crosslinguistic study is a valid and reliable method for the discovery of general principles of language acquisition.

One consequence of these new ways of looking at the notion of transfer is a renewal of interest in contrastive analysis. The rejection of CA by researchers such as Dulay and Burt now appears to have been premature. Research on transfer has led to a richer and more sophisticated view of the goal of CA (Zobl 1983, 1984). Emphasis on the notion of markedness, in particular, has lead to contrastive statements about predicted learning difficulty (Hyltenstam 1982; Kellerman 1983; Rutherford 1982). It is apparent that the first language and previously known languages do affect the course of interlanguage development, but this influence is not always predictable.

The work of Kellerman and others has resulted in some testable hypotheses about when transfer from the L1 affects the interlanguage, although the fluid and amorphous nature of the interlanguage and the inadequacy of our testing procedures leave much to be discovered about the role of L1 transfer." (McLaughlin, 1987, p. 79)

As the tools of contrastive linguistics become more refined, the problems will recede. However, the difficulty of accounting for both the linguistic and the psychological aspects of Contrastive Analysis remains a major concern to linguists. The accuracy of prediction will always be open to doubt if Contrastive Analysis fails to specify the conditions that determine if and when interference takes place. The "hierarchy of difficulty" was an attempt to solve this problem linguistically, but unless the solution has psychological validity (i.e. corresponds to what learners actually do), it will be inadequate.

The longitudinal studies on language acquisition have provided strong evidence in favour of a natural developmental route in SLA. Attempts have been made to describe the overall course of development in SLA as a series of overlapping stages, and so create a composite picture. However, the universality of the interlanguage continuum needs to recognize that there are differences traceable to the learner's L1 and other previously known languages.

OTHER COGNITIVE STRATEGIES

Ignorance of the TL structures need not lead to interference at all. As Kellerman observes (1977), learners use whatever means they have at their disposal to overcome the TL knowledge deficit. The form and system of the TL itself may lead to error, and the learner may seek other solutions, such as paraphrase, avoidance, simplification or even silence. Moreover, if a linguistic solution is chosen it need not result in error.

Some of the strategies employed by language learners are summarized diagrammatically in figure 2.

Type of strategy	Examples
Learning strategies	Simplification (1) Overgeneralization (2) Transfer Inferencing (1) Intralingual (2) Extralingual
Production strategies	Hypothesis-testing strategies Planning strategies (1) Semantic simplification (2) Linguistic simplification
Communication strategies	Correction strategies Reduction strategies (avoidance) (1) Formal (2) Functional

based on Ellis 1985b

Figure 2
Cognitive Strategies

In this figure it can be seen that there are a number of linguistic solutions to ignorance of a certain rule or

item in the TL. The learner may resort to learning strategies such as (1) simplification (which include overgeneralization and transfer, (2) inferencing (which includes those inferences based on intralingual factors and those which are based on extralingual features of the physical environment), and various other hypothesis-testing strategies.

When attempting to produce utterances in the TL the learner may use production strategies which include planning strategies (those may involve semantic simplification, linguistic simplification, or the omission of form words and affixes), and correcting strategies or monitoring.

Communication strategies include reduction strategies (which can be formal - i.e., the avoidance of certain second language rules - or functional - i.e., the avoidance of certain speech acts or discourse functions). A fuller account of these strategies and their various manifestations can be found in Ellis (1985b). The ones listed above suffice for the purposes of the present study.

McLaughlin (1987) states that,

In the initial stages of the acquisition process, learners tend to simplify, regularize, overgeneralize, and reduce redundancy. At this point the learners seek to override the evidence of the input by constructing an internal representational system that is more simple than the input and relies on the first language, and on universal principles. (p. 146)

This corresponds to Andersen's nativization process which was mentioned earlier in this paper.

At later stages in second language development, inferencing strategies seem to predominate as learners attend more closely to input data. These strategies of inferencing and hypothesis-testing govern the process of reconstructing/restructuring that govern the process of reconstructing / restructuring that Corder (1978b), McLaughlin (1987), Ellis (1985a), and others refer to.

CHAPTER 2

RATIONALE

The preceding chapter provided a summary of the principal theories proposed to account for learners' interlanguages. This chapter provides a more detailed explanation of the rationale for this study and presents a review of studies that are directly related to the present one.

...we should remember that the studies have so far been almost entirely limited to English. We need confirmatory evidence from other languages before we can be confident in making generalizations about second language learning as a human phenomenon. (Littlewood, 1984, P. 41)

Littlewood's remark is, indeed, one that should not be overlooked. The present study attempts to shed some light on this issue by questioning how some of the cognitive processes that are believed to operate in the minds of L2 learners, operate in a bilingual situation where L1 is Portuguese and L2 is English, as well as in a trilingual situation where L1 is Tsonga, L2 is Portuguese and L3 is English. That is to say, how the two previously known languages affect these cognitive processes, and in particular, how the two languages (Tsonga and Portuguese) "compete" in the process of transfer.

My practical experience as a foreign language teacher in Mozambique, and contact with L1 speakers of various Bantu

languages studying at SIUC has led me to form the hypothesis that a substantial number of persistent errors made by these speakers could be traced back on some occasions to their L1, but, on other occasions to their L2. In an attempt to discover what cognitive processes were at work in the minds of these learners of English, a study was conducted during Spring 1989, at SIUC, the main purpose of which was to investigate:

- (1) whether there was interference from L1 and L2 in the process of acquiring English by two groups of native speakers of various Bantu languages, one of the groups having acquired French (L2) previous to learning English and the other group learning English as their L2,
- (2) whether the degree of interference from L1 was significantly different between the two groups, and
- (3) whether there was a significant difference between their oral and written performance.

The grammatical structure chosen to be investigated was the comparative construction. These speakers' use of articles in English was also analyzed because, even though that structure had not been elicited, a substantial number of errors occurred.

The errors produced by these speakers of different Bantu languages, some learning English as their L2 and others as their L3, were analysed and the results showed that:

(1) There was a low percentage of errors reflecting interference from French into English.

(2) The bilingual speakers of a Bantu language and French produced the same kind and similar percentages of L1 interference errors in the use of comparatives both in French and in English.

(3) In the use of articles, however, considerable differences were detected: there were more L1 interference errors in English than in French.

(4) The bilingual speakers of a Bantu language and French produced more oral than written L1 interference errors both in the use of articles and comparatives, and there was no significant difference between their performance in French and in English. The speakers of a Bantu language learning English as their L2 produced more oral than written errors but the differences were not significant.

Although that study did not account for several other variables, such as amount of exposure these subjects had had to English (the monolingual group had been exposed to English for a longer period of time, in a country where English is a second language), different backgrounds in terms of educational systems and teaching methods, the results show clearly that there was interference from L1 and L2 into English. L1 interferes in the acquisition of L3, even though L2 and L3 are genetically related, and possess very similar ways of linguistically realizing the structures in question. The monolingual speakers of a Bantu language

did not show a great amount of interference probably because they had had several years of exposure to English and were not at their initial stages of learning the language. Nevertheless, they still made, sporadically, some errors which were thought to be interference from their L1. As for example, "Ana is beautiful than Mary."

Although recent empirical research on second language acquisition of syntax and morphology provides little evidence for a strong version of the CA hypothesis (as set forth, for example, by Lado, 1957), transfer does seem to be an important factor especially when certain structural similarities hold between the languages (Ervin-Tripp, 1974; Wode, 1976). CA certainly has its role, along with other theories, such as CC and PCD, in the task of accounting for the nature of the learners' performance.

Based on the enormous body of information on L1 and L2 acquisition (e.g. Fathman, 1975, 1979; Neumann, 1977; Linde, 1971) and on my own experience, I selected two linguistic structures to be analysed in the present study, namely, the comparative construction and the use of article to express specificity and nonspecificity.

Though taking into consideration the fact that other languages are spoken in the country, the object of this research has been Tsonga, that comprises the following dialects: Ronga, Changana, and Xitswa spoken in the Southern part Mozambique, in the provinces of Maputo, Gaza, Inhambane

and in the meridional region of the provinces of Manica and Sofala. It is important to mention that these three languages are mutually intelligible. Tsonga was selected partly for practical reasons of access, and partly because it represented a more homogeneous group since the data collection was done in the region of the country where that language is spoken.

As mentioned in the literature review, the degree of linguistic difference does not always correspond to the degree of learning difficulty. According to CA the structures that overlap may also cause difficulty; interference from Portuguese was also predicted in the structures where there was only partial overlap. Below is a diagram to illustrate how the overlap among these languages is viewed in this paper.

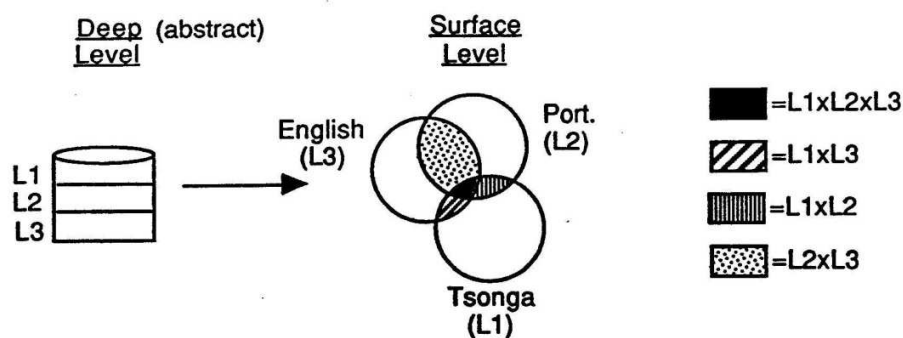


Figure 3
The overlap between languages

The darker area is thought to be facilitated because it comprises structures that are similar, and therefore, reinforced in the three languages.

The rationale for the present study and the following hypotheses are based on the conviction that, although differences can be identified linguistically, difficulty involves psychological considerations as well.

It is one thing to develop categories, ..., for classifying the ways in which two languages differ. It is quite another, however, to relate these linguistic differences to learning difficulty.
(Ellis, 1985b,
p. 26)

In this study the theory of Transfer, the theory of Contrastive Analysis, the theory of Creative Construction, the theory of Pidginization, and the notion of language distance interrelate in an attempt to explain learners' interlanguages. In spite of the many studies that have been conducted over the years which provide support for each of these theories, the findings are controversial. The Contrastive Syntax Series (Stockwell, Bowen and Martin) in the 1960's provides full length studies of the contrastive syntax of the major European languages and English, while the 1970's saw a number of studies in Europe (see James 1980:205 for a list).

Neumann (1977), in her study attempted to contrast the shared errors of intermediate learners with those of beginning learners. She analysed errors made in the

compositions of 158 students. Among the most frequent errors of the intermediate students were:

885 Noun modification errors (including 262 omissions of definite article; 206 omission of indefinite article; 226 articles used where not needed).

One of the objectives of that study was to find out whether errors on structures would differ according to the first language of the learners, and whether the scores would vary according to the proficiency level of the students. Neumann found that the native language of the learner did make a difference on two error types. Japanese and Korean students made more article omission errors than the other learners. Surprisingly, the mean number of errors in each category (beginning/intermediate/advanced) failed to show significant change across levels with one exception - word order errors.

Neumann's study (1977), like most error analyses, is based on written data. In contrast, Linde (1971) worked with oral data, tabulating errors made by Japanese speakers during conversations. He found that each of his Japanese learners made the same error many times in the speech sample. This may be evidence (contrary to Taylor's findings, 1975) that each learner's interlanguage is consistent and reliable. However, not all subjects made the same errors, despite their common first language - evidence

for the variability of and lack of influence from the source language.

Fathman (1975) looked at the accuracy order of acquisition. She developed a test, the SLOPE (Second Language Oral Proficiency Exam), to elicit specific grammatical forms, including inflectional morphemes. She compared the responses of sixty Korean and sixty Spanish children learning English (ages six to fourteen). Her basic research questions were whether or not age and learning situation influenced the order or general overall accuracy. The only area that showed a significant difference between the two first language groups was the article. Although not significant, a trend toward a difference was obtained for possessives, comparatives, superlatives, and plural irregulars. On the basis of her test, differences attributable to the first language did show up, though perhaps not as strongly as one might have predicted. In a later study Fathman (1979) confirmed her earlier finding that Korean and Spanish learners were significantly different in acquiring the articles.

In summary, research on the acquisition of articles in English suggests that speakers of languages that do not express specificity/nonspecificity by the same device used in English (e.g. Japanese, Korean), acquire articles much later and with more difficulty than speakers of languages that have that device (e.g. Spanish, Portuguese).

This seems to support the claim that mother tongue has a greater influence than suggested by some of the studies done in the past. In regard to the acquisition of the comparative, however, not much has been done. The few findings that are reported suggest that there is only a trend toward differences among groups of subjects with different language backgrounds (e.g. Fathman 1975). Therefore, there is not much evidence for L1 interference in this particular construction.

THE GRAMMATICAL FEATURES BEING STUDIED

A comparison of two or more languages can be carried out using any of several different models of grammar. In the early days the model used was that of the structuralist linguists (e.g. Bloomfield, 1933; Fries, 1952). Structuralist linguists, however, considered the differences among languages so great that it would not be possible to set up any system of classification that would fit all languages. Obviously, this presents a problem: How can an effective comparison be executed if languages cannot be compared because they do not have any categories in common? This problem was ignored, however, in spite of contrastive studies that were carried out in the United States (e.g. Stockwell and Bowen, 1965; Stockwell, Bowen and Martin, 1965). These studies compared languages from within the same language family (e.g. English and Spanish), so the

problem of identifying a set of categories which were common to both languages was not acute.

Although, for all practical purposes, the problem of establishing a linguistic basis for comparison could be overlooked, the theoretical problem remained.

In the late 50's and early 60's the Contrastive Analysis theory began to gain more acceptability. Ideally, CA needs to be based on universal categories (i.e. categories that can be found in all natural languages) which differ in the way that they are linguistically realized from one language to another. Chomsky's (1965) theory of grammar proposed just such a model and as such offered a theoretical basis for CA.

Despite Chomsky's contribution, most of the studies carried out have been based on surface structure characteristics such as those described by the structuralists. In addition, the set of languages analyzed has been very small. The procedure followed has been (1) DESCRIPTION (i.e. a formal description of the two languages is made; (2) SELECTION (i.e. certain items, which may be entire subsystems such as the auxiliary system or areas known through error analysis to present difficulty, are selected for comparison); (3) COMPARISON (i.e. the identification of areas of difference and similarity); and (4) PREDICTION (i.e. identifying which areas are likely to cause errors).

Stassen (1985) broke away from the common practice in that he did a much broader linguistic investigation than other linguists had done so far. He presented a typology of comparative constructions which is based on a sample of one hundred and ten languages. Stassen applied the methods of Typological Universal grammar to the description of the various possibilities which languages possess to express comparison. His methodology differed from established practice in a significant number of respects. The procedure he adopted, which is commonly used by universalist linguists, was the following: (1) establish a language sample, which forms the empirical basis of the research project at issue; (2) investigate the languages in the sample for one or several structural features. (3) start the actual construction of the typology (the languages in the sample are classified into a number of categories, on the basis of differences and similarities in the way in which the parameter of the typology is formally expressed by each language.)

The structural features chosen in step 2 constitute the basis of categorization into types, which form the parameter of the typology and which must be defined beforehand in a language-independent fashion, i.e., in terms which are independent of the characteristics of single languages or groups of languages. In recent universalist studies which deal with morphological or syntactic variation among

languages, the common strategy has been to employ semantic or cognitive definitions for the parameter of the typology (e.g. Keenan and Comrie 1977).

In this section of the paper a brief grammatical description of the linguistic aspects being studied (the expression of specificity and nonspecificity, and comparisons) in the three languages concerned, namely Tsonga (L1), Portuguese (L2), and English (L3) will be presented following the methods of Transformational Grammar and Typological Universal Grammar.

Only those linguistic facts which are relevant to this study will be dealt with. In so limiting the description, it is realized that it is not complete and does not cover these structures in detail. However, for the purposes of the present study this analysis will suffice.

1. THE CONCEPT OF SPECIFICITY AND NONSPECIFICITY

Frith (1977) makes a distinction between the use of the terms definite and indefinite, which are used for the grammatical forms 'the' and 'a', and the terms specific and nonspecific, which are used for the semantic distinction between their use. As Frith (1977) says, "The distinction between form and function made here is not a trivial one because, as Maratosos (1971) and R. Brown (1973) pointed out, definite and indefinite forms do not stand in a simple one-to-one relation with specific and nonspecific meanings"

(p. 92). 'The' and 'a' have other functions such as "classifying" and "generic" which do not relate directly to the specific versus nonspecific contrast.

While Portuguese and English make use of articles to express the notion of specificity and nonspecificity, Tsonga does not have that device. Below is a description of how the system works in each of the three languages.

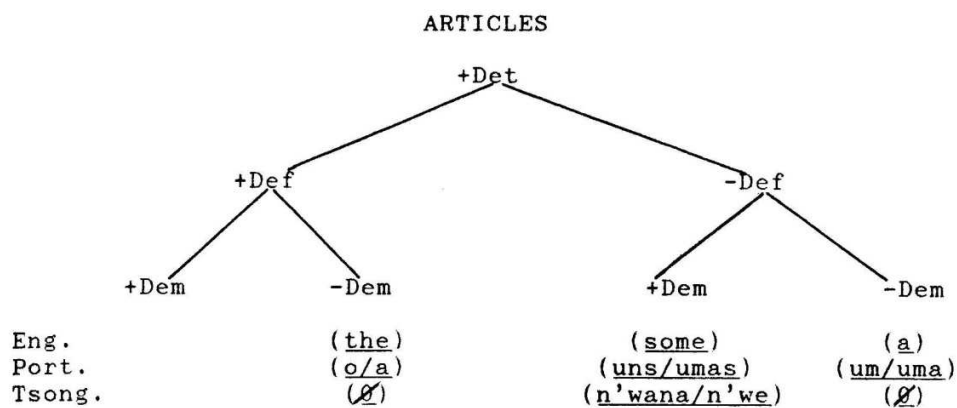


Figure 4
A feature chart of the article system

The feature chart shown in Figure 4 illustrates how articles are analyzed in transformational-generative grammar as represented by Jacobs and Rosenbaum (1968). This means that the segment structure rules assign the features <+definite> or <-definite>. Although the chart does not show this, one must remember that in this grammatical framework nouns are subcategorized in the lexicon into <+common>, <-common>, <+count> and <-count>. These four

sets of features cannot co-occur in all of the combinations that are possible. For instance, nouns that are marked <-common> must also be marked <+definite> and <-plural>; and nouns marked <-count> must be marked <-plural>.

ENGLISH

After introducing a segment to the left of the noun, this segment copies onto it all the features of the noun. Thus if the features on the noun are <+common>, <+count>, <+singular> and <-definite>, the lexicon supplies the article 'a'. In English the allomorph 'an' is supplied when the noun begins with a vowel. If however the features on the noun are <+common>, <+count>, and <+singular> and <+definite>, the lexicon will supply 'the'. 'The' and 'some' are unmarked for +/-plural because they work both ways:

the girl was here	the girls were here
some girl was here	some girls were here

PORTUGUESE

Portuguese also makes use of articles to express the concept of specificity and nonspecificity. The article, which is placed to the left of the noun, takes on all the features of that noun. Thus if the features are <+common>, <+count>, <+singular>, <-definite> and <+feminine>, the lexicon supplies the article 'uma'. If the features are the same as the first four above, but differ in the fifth,

<-feminine>, then the lexicon will supply the article `um'. If instead of having the feature <+singular>, the noun has the feature <-singular>, and the rest of the features are the same, then the lexicon will supply the articles `umas' and `uns' respectively. If, however, the noun has the features <+common>, <+count>, <+singular>, <+definite> and <+feminine>, the article `a' will be supplied. If everything remains the same except for the gender, then we will have the article `o'. The lexicon will supply `as' and `os', respectively, if what changes is the number.

TSONGA

Apparently there is no definite article in the Bantu languages; there are inseparable vowels prefixed to the noun to show the number, and the next prefix shows which noun class that particular noun belongs to. The noun is indefinite unless determined by a "weak" demonstrative or by another noun joined to it.

Tsonga is not an exception. It has neither definite nor indefinite articles. The function performed by articles in Portuguese and English is fulfilled by demonstratives whenever it is necessary to mark the definiteness of something. Tsonga does have a <-count>, <-definite> article "n'wana/n'we" equivalent to the English `some' and the Portuguese `uns/umas'. This article is generally postposed to the noun.

E.g.

"siku ri-n'wana"
(some day)


"Vanhu va-n'wana" or "va-n'we vanu"
(some people)

DISTRIBUTION

Although the degree of overlap between Portuguese and English is considerable, there are some differences in the distribution of the articles in the two languages. For example:

1) In English, as well as in Portuguese, the null (\emptyset) article, which is nondefinite, is used before plural count nouns when making a general statement about people or things, and before proper names. Proper names are generally preceded by the null article in English while in Portuguese they may or may not be preceded by the null article; the case being that in the Mozambican variety of Portuguese the definite article is more commonly used. Thus, 'Mary is tall' can be 'A Maria é alta' or 'Maria é alta'.

2) Convergent phenomena (i.e. two items in the L1 become coalesced into one in the L2.) In English the article is not marked for gender and number as it is the case in Portuguese.

E.g. o/os  the
a/as

Proper use of articles depends upon their use in discourse rather than solely in a noun phrase or a single

sentence. While the Portuguese article system is quite predictable and reliable, the English article system is notoriously problematic for ESL/EFL students from a variety of language backgrounds because of the difficulty of generalizing reliable usage rules from the idiosyncratic use of the forms to express different notions of specificity and nonspecificity. Some uses of the definite article follow no logical pattern, for example, we say "She's at the office" but "She's at school" or "I play the piano" but "He plays tennis". There is no principled explanation for the obligatory occurrence of the article with 'office or piano' and not with 'school or tennis'. There is also a large number of expressions which take the null article in some contexts, and the definite article in others, and it is almost impossible for the learner to figure out any reliable rules to distinguish these contexts, particularly in the early stages of learning the language.

2. COMPARATIVES

As another example of similarities and differences in the surface representation of a "deep" structure we may consider the fact that all languages possess some means of representing comparative relations like those represented in English by "...more...than..." , "...-er...than..." or "...as...as...". In conformity with the strategy currently favored among universalist linguists, Stassen has chosen to

use a semantic criterion for identifying cases of the comparative construction across the languages in his sample. In his definition of the concept "comparative construction" Stassen (1985) writes:

a construction counts as a comparative construction (and will therefore be taken into account in the typology), if that construction has the semantic function of assigning a predicative scale to two (possibly complex objects). (p. 15)

According to him, a case of comparison of inequality involves at least three things: a gradable predicative scale, which represents the property on which the comparison is made, and two concepts, one of which represents the standard against which the other is measured and found to be unequal.

Given this semantic definition of the comparatives, we should be able to identify the cross-linguistic codification of the concept of comparison, thereby establishing the data base of the typology.

Only the comparative degree will be dealt with in the present study and three kinds of comparatives will be analyzed; a) comparative of equality, b) comparative of superiority, and c) comparative of inferiority.

Like Stassen, I have found it useful to confine my typology to those cases of comparative constructions in which two objects or individuals (typically expressed in the form of NPs) are being graded against each other.

The reason for this decision is entirely practical. All grammars of the languages in the study indicate the way in which NP-comparatives are formed; however, they do not, in general, provide for sufficiently reliable data on constructions in which other elements (say, adjectives, verbs or clauses) are involved. Thus, the prototypical sentence for this investigation will be a sentence along the lines of those in (1), and not of those in (2):

(1) ENGLISH

- a. The rat is smaller than the cat.
- b. Rosa is more beautiful than Carla.

(2) ENGLISH

- a. Gilda is more hard working than intelligent.
- b. The Broncos played better this year than last year.
- c. This baby is smarter than you think.

Given this limitation to cases of NP-comparison, the following terminology will be adopted throughout the discussion. The linguistic codification of the predicative scale in a comparative construction will be termed the comparative predicate or simply the predicate; of the two NPs in the construction, the NP which indicates the object that serves as a yardstick for the comparison will be referred to as the standard NP. The other NP in the construction, which refers to the object of the mental operation of comparison, will be called the comparee NP (9).

Thus, in a sentence like 'John is taller than Mary', the NP Mary is the standard NP, and the NP John the comparee NP.

The predicative adjective tall, which names the scale on which the comparison takes place, is the comparative predicate in this particular comparative construction.

Stassen (1985) evaluated the possible starting points for a cross-linguistic typology of comparatives and opted for a categorization in which the encoding of the standard NP is taken to constitute a highly significant factor. He arrived at a classification of five clearly identifiable variants. Below I will introduce only two of the variants which are relevant to the present study: the Particle Comparatives (e.g. Portuguese and English) and the Exceed Comparatives (e.g. Tsonga).

2.1. PARTICLE COMPARATIVES

The classification of the so-called Particle Comparatives is not straightforward. Under the heading of 'Particle Comparatives' Stassen has lumped together a number of constructions which share at least one common feature namely, the fact that they are, or have been, instances of derived case. However, these constructions also lack a number of features which characterize the main class of derived-case comparatives. For one thing, Particle Comparatives do not (or do not have to) consist of two grammatically independent clauses, at least not in their

present synchronic form; in other words, Particle Comparatives do not have the structural form of a coordination of clauses as it is the case, for example, in Gayapo:

E.g. Gayapo: Gan ga prik, bubanne ba i pri.
You you big but I I small.
(You are bigger than me.)

As a result, the standard NP in the Particle Comparatives functions structurally as a constituent part of a phrase in the clause which also contains the comparee NP.

A typical characteristic of all Particle Comparatives is the presence of a specific comparative particle, which accompanies the standard NP. In the typical case, this particle cannot be identified as some kind of case marker, since the case form of the standard NP in this type of comparative is derived from the case assignment of the comparee NP.

Portuguese and English are examples of languages with a Particle Comparative. What follows is a description of how comparisons are expressed in these two languages.

ENGLISH

a) COMPARATIVE OF EQUALITY

The comparative of equality is expressed by means of correlative constructions such as "as...as" or "so...as".

E.g. Mary is as pretty as Elsa.

b) COMPARATIVE OF SUPERIORITY AND INFERIORITY

As a general rule, in English, comparisons of superiority and inferiority are made by using either the periphrastic form "more /less" if the adjective is polysyllabic, and if it ends in "-ly", "-ous", and "-ful", "-ish", "-less", "-ed" or by adding the suffix "-er" if the adjective is monosyllabic, followed by the correlative construction introduced by "than".

E.g. Superiority Mary is more beautiful than Elsa.

 Mary is prettier than Elsa.

 Inferiority Mary is less beautiful than Elsa.

PORTUGUESE

a) COMPARATIVE OF EQUALITY

The comparative of equality is expressed by placing the adverb "tão" in front of the adjective, followed by the conjunction "como/quanto".

E.g. A Mary é tão bonita como/quanto a Elsa.

(Mary is as pretty as Elsa.)

b) COMPARATIVE OF SUPERIORITY AND INFERIORITY

In Portuguese the comparative of superiority and of inferiority is expressed by a periphrastic form "mais /menos" respectively which must be used with both monosyllabic and polysyllabic adjectives, followed by a correlative construction introduced by "(do) que".

E.g. Superiority A Mary é mais bonita do que a Elsa.
 (Mary is more beautiful than Elsa.)

Inferiority A Mary é menos bonita do que a Elsa.
 (Mary is less beautiful than Elsa.)

2.2. THE EXCEED COMPARATIVE

The main characteristic of this variant is that the standard NP is invariably constructed as the direct object of a special transitive verb, the meaning of which can be glossed as "to exceed" or "to surpass". Furthermore, the comparee NP always functions as the subject of this "exceed" verb.

As to the representation of the comparative predicate in this type, strategies may differ from language to language. Some languages prefer a "serial verb" construction, in which the comparee NP is constructed as the subject of a verbal complex which contains both the comparative predicate and the "exceed" verb. Of the three languages being investigated Tsonga is the only one that uses this type of Exceed Comparative.

E.g. "Sayi leri risasekile kutlula leriya."
 (Skirt this is beautiful passes that one.), i.e.
 (this skirt is more beautiful than that one.)

TSONGA

Most Bantu languages have a class of qualifiers that approach the concept of "adjective" in English. However, affixes and additions corresponding to "-er" in English, such as in "smaller", or to the Portuguese and English

periphrastic form "mais/more" respectively, for example, " mais bonito", "more beautiful", do not exist in Tsonga. The Bantu languages, in general, have been treated with a certain degree of superficiality. For example, the use of the term "adjective" exemplifies the lack of sophistication in the description of these languages. This term has frequently been applied to any form which is reflected by an English adjective in translation, without reference to its derivation or grammatical function in the language being described. Some studies have shown, however, that in the Bantu languages the quality of a noun can be indicated by nominal qualifying forms (e.g. infinitives put in the form of nouns), by verbal qualifying forms (e.g. verbs put in the perfect tense '-ile' to indicate the presence of a quality), and by stative verbs, among other forms.

a) COMPARATIVE OF EQUALITY

In Tsonga the comparative of equality is obtained through verbs like "Kufana, Kuringana, kukota " meaning " to be equal, to be similar" and also through nouns, and comparative locutions like "tanihi, swangahi", which are generally followed by the particles `ni' (more common) `hi' or `na', which introduce the second member of the comparison.

<p>E.g. Yindlo ra mina yilehile kufana ni/kuringana ni/ kukota ra wena. (my house is high looks</p>	<p>My house is as high as yours.</p>
--	---

like/is equal to yours.)

Buku ra mina risasekile kufana ni ra wena. (my book is pretty, is equal to yours.)	My book is as pretty as yours.
---	-----------------------------------

Sayi leri risasekile tanihi leriya (this skirt is beautiful is equal to that one.)	This skirt is as beautiful as that one.
---	--

b) COMPARATIVE OF SUPERIORITY

The comparative of superiority is obtained by putting the particle `ka', the particle `ku ni' or `ku na' (meaning `in relation to/than'), or verbs such as `kuthlula, kuhundza (meaning `to surpass/to exceed'), after the first member of the comparison. As in the comparative of equality, these verbs can function as real verbs, as adverbs, and can be translated by `more... than' or `-er...than'. There is also an adverb `ngophu' (meaning `very'/'much') which is frequently used as an intensifier.

E.g. Yindlo ra mina yilehile ngofu ka ra wena. (my house is high very than/in relation to yours.)	My house is higher than yours.
Buku ra mina risasekile ngofu kuthlula/kuhundza ra wena. (my book is pretty very surpasses yours.)	My book is prettier than yours.
Sayi leri risasekile kutlula leriya. (this skirt is beautiful passes that one.) or Sayi leri risaselile ka leriya.	This skirt is more beautiful than that one.

(this skirt is beautiful
than/in relation to that one.)

c) COMPARATIVE OF INFERIORITY

The comparative of inferiority is obtained by using the adverb
`tsongo' (meaning `little/small') followed by `ka';
also by means of the verb `kuthlula' in the negative or in the
affirmative passive (kitluliwa); or by means of verbs like `kufika',
`kuhundza' in the negative.

E.g. Yindlo ra mina ayilehanga
kufika ka ya wena.
(my house is not high
to reach/in relation to yours.)
or
Yindlo ra mina yilehile kutluliwa
hi ra wena.
(my house is high, (but) is
surpassed by yours.)

My house is
shorter than yours.

Buku ra mina risasekile
Kutsongo ka ra wena.

(my book is pretty little
in relation to yours.)

My book is less
pretty than yours.

Sayi leri ayirisasekile
kutlula leriya
(this skirt is not beautiful
to surpass that one.)

This skirt is less
beautiful than that
one.

DISTRIBUTION

As can be seen, there is a greater overlap between the Portuguese
and the English constructions, than there is between these two
languages and Tsonga. There are, however, some differences, as for
example:

1) Divergent phenomena (i.e. one item in the first language becomes two items in the target language)

E.g.

i) PORTUGUESE

ENGLISH

more...than

Mais...(do) que

-er...than

ii) PORTUGUESE

ENGLISH

much (adverb)

e.g. "much more...than"

muito (adverb)

e.g.i) "muito mais....(do) que

ii) "muito bom"

very (adverb)

e.g. "very good"

On the basis of universal categories, we have introduced the different ways in which the three languages in question (Tsonga, Portuguese and English) realize the linguistic features selected for investigation (comparatives and the expression of specificity/nonspecificity). In the following section the hypotheses and research questions will be presented.

HYPOTHESES

It has been hypothesized that, proficiency in L2 would enhance the acquisition of L3 when L2 and L3 are

typologically, genetically, and areally related. Positive transfer is thought to occur where the linguistic concepts in the two languages (L2 and L3) are expressed in similar ways. Therefore, the fact that L1 is not related to either L2 or L3 would have very little effect in learning the L3.

Specifically, in our case, the languages for investigation are: Tsonga (L1 for the majority of the subjects), Portuguese (L1 for some of the subjects and L2 for the speakers of Tsonga), and English (L2 for the monolingual speakers of Portuguese, and L3 for the bilingual speakers of Tsonga and Portuguese). It was hypothesized that proficient speakers of Portuguese (whether or not it was their L1) learning English would have more positive transfer from that language, and therefore less difficulty with the English structures and forms than would non-proficient speakers of Portuguese. In other words, the learning process would be facilitated for the former kind of speakers. Learning English would require much less mental effort enabling them to concentrate on the structures that cause them difficulties, which are fewer for these learners than for the latter kind of learners.

RESEARCH QUESTIONS

GENERAL

I. Does proficiency in L2 enhance the acquisition of L3 when L2 and L3 are typologically and genetically related, whereas

L1 is not related to either of the two?

(Proficiency effect)

NULL HYPOTHESIS 1: there is no significant difference in English performance among subjects with different levels of proficiency in Portuguese.

II. Is there a significant difference between oral and written performance in the target language?

(Task effect)

NULL HYPOTHESIS 2: there is no significant difference between oral and written tasks.

III. Is there a significant difference among error types produced?

(Error type effect)

NULL HYPOTHESIS 3: there is no significant difference among error types.

IV. Is there a significant difference between the oral and the written performance across the three different levels of proficiency in Portuguese?

(Task x Proficiency effect)

NULL HYPOTHESIS 4: there is no significant task by proficiency interaction.

V. Is there a significant difference in error type as a function of proficiency in Portuguese?

(Error type x Proficiency effect)

NULL HYPOTHESIS 5: there is no significant error type by proficiency interaction.

VI. Is there a significant difference in the error types as a function of the difference between oral and written performance? (Task x Error type effect) NULL HYPOTHESIS 6: there is no significant task by error type interaction.

VII. Is there a significant difference among the error types as a function of proficiency and task simultaneously? (Error type x Proficiency x Task)

NULL HYPOTHESIS 7: there is no significant error type by proficiency by task interaction.

After these general questions are answered by using the ANOVA procedure, more specific questions will be addressed and answered by a different statistical test, the Duncan's multiple range test.

See appendix C for a list of error types produced.

SPECIFIC

VIII. Is there a significant difference in the frequency of errors reflecting interference from Tsonga (error types 2, 3, and 7) between proficient and non-proficient L2 speakers of Portuguese? (Error type x Proficiency effect)

NULL HYPOTHESIS 8: there is no difference among the three levels of proficiency for error types 2, 3 and 7.

IX. Is there a significant difference in the frequency of errors reflecting interference from Portuguese (error type 1) between proficient and non-proficient speakers of speakers of Portuguese?
(Error type x Proficiency effect)

NULL HYPOTHESIS 9: there is no difference among the three levels of proficiency for error type 1.

Is there a significant difference among the three levels of proficiency for error types 4, 5 and 6?

(Error type x Proficiency effect)

NULL HYPOTHESIS 10: there is no significant difference among the three levels of proficiency for error types 4, 5 and 6.

XI. Is the difference between the scores on the written task and on the oral task, for each error type, significantly different across the three levels of proficiency?

(diff Error type oral-Error type written x Proficiency)

NULL HYPOTHESIS 11: there is no significant difference between the difference in the scores of oral and written tasks for each error type.

CHAPTER 3

METHODOLOGY

Subjects: The sample for this study was drawn from a population of Mozambican secondary school students, ages 13-20, enrolled in grade 9 (third year of English instruction), in one of the secondary schools in the city of Maputo. Sixty-three subjects were selected according to three grouping characteristics: Group 1 consisted of speakers of Tsonga (L1) who were proficient in Portuguese (L2); Group 2 consisted of speakers of Tsonga (L1) who were not proficient in Portuguese (L2); and Group 3 consisted of monolingual speakers of Portuguese (L1). These three groups will hereafter be referred to as Bilingual Proficient (BP), Bilingual Non-proficient (BNP), and Monolingual Proficient (MP), respectively.

Instruments: Two sets of instruments were developed. The first was a questionnaire designed to assess the language background of each subject [Appendix A]. The second set, composed of two tests, one in Portuguese and the other in English, was designed to serve two purposes: the test in Portuguese was designed to provide additional information about the subjects proficiency in Portuguese to permit an accurate placement of the subjects in each of the three groups mentioned above. The test in English was designed to elicit the subjects' English proficiency. Both tests

consisted of a written and an oral task: The oral task was an open-ended question in which the subjects were required to compare two pictures [Appendix B3], and the written task consisted of four subtests with ten items each [Appendix B1 and B2]. Each of the subtests aimed at testing different language skills; the first three were production tasks (open ended, fill in the blanks, and completion). The last was a recognition task (multiple choice).

Procedure: The questionnaire and the Portuguese oral and written test were given preliminary to the English test in order to select and group the subjects into the three predetermined groups. It was necessary to determine which learners would fall into the groups mentioned above because they do not exist as separate, independent groups in the Mozambican schools. No distinction is made regarding their different language backgrounds, and therefore students are all integrated in a single class and they all receive the same language training.

The subjects were given 20 minutes to complete the questionnaire. The written task lasted 45 minutes, and the oral task, which was conducted on an individual basis by the researcher, lasted approximately 10 minutes for each subject.

Later, the procedure followed for the Portuguese test was used to conduct the English test. The written task also

lasted 45 to 60 minutes, and the oral task lasted 10 to 15 minutes. Since the subjects were not proficient in English they required more time to complete the tasks than they did in Portuguese.

In both languages each subject was instructed to describe and compare the two pictures [Appendix B3] using some of the adjectives provided in a list that was placed next to the pictures. The subjects' utterances were tape recorded and later analyzed.

The information gathered from the written and oral tasks in Portuguese allowed a finer judgment of their proficiency in that language and consequently a more accurate placement in each of the groups. Proficiency was measured by the frequency of errors in the two structures being investigated, and 40% was considered the maximum amount of errors allowed to a proficient speaker of Portuguese.

Data coding: to sort the data a matrix was prepared. The researcher constructed her own data sheet, which was divided into rows for the variable proficiency and columns for the other two variables, namely task (oral and written) and error type (seven in each exam) to form the cells of the matrix.

Each test was scored by the researcher. The frequency with which each subject produced a certain error type was

recorded. These frequencies were later converted into percentages because the number of items in the two tasks (oral and written) were unequal.

Data analysis: A SAS statistical package was used to analyze the data. The level of significance was set at $\alpha = .05$. Since this was a three-factor experiment (proficiency, task, and error type) in which the same subjects were measured more than once in two of the factors (task and error type), the data was analyzed using a two-way Analysis of Variance (ANOVA) procedure for a repeated measure design in two of the factors. The ANOVA procedure tested for the differences between proficiency groups mean achievement, task mean achievement and error type mean achievement as well as the interactions among those variables. Upon rejection of some of the null hypotheses a Duncan's multiple range test for pairwise comparisons was used. The Duncan's test tested for pairwise comparisons of proficiency group means achievement, task means achievement, and error type means achievement, as well as the interactions.

CHAPTER 4

RESULTS

The present study addresses the issue of the acquisition of comparatives and articles in English by monolingual speakers of Portuguese and bilingual speakers of Tsonga and Portuguese. The main concern of the study was: (1) whether there was interference from L1 and L2 in the process of acquisition of English by three groups of speakers of Portuguese, two of the groups having acquired Tsonga (L1) previous to learning Portuguese (L2). (2) to investigate whether or not errors on the structures selected would differ according to the learners' proficiency level in their L2.

Findings

Our basic results for the acquisition of the English comparative construction are reported in Tables 1 and 2. Tables 3 and 4 present the results for the acquisition of the English articles system.

Table 1

Means and Standard Deviations (Comparatives)

	<u>Oral</u>			<u>Written</u>		
	M	SD	n	M	SD	n
BNP	76.19	24.18	21	79.64	14.43	21
BP	59.04	29.30	21	57.73	18.48	21
MP	53.50	30.48	21	57.87	21.87	21

BNP = Bilingual non-proficient
BP = Bilingual proficient
MP = Monolingual proficient

Table 2

ANOVA test for performance on comparatives

Source	SS	DF	MS	F	PR>F
Task	1731.65	1	1731.65	466.48	0.0001
Etype	4903.53	6	817.25	56.03	0.0001
Prof	114.17	2	57.08	10.98	0.0001
Task x Etype	1458.79	6	243.13	28.24	0.0001
Task x Prof	45.47	2	22.73	6.12	0.0038
Etype x Prof	1542.85	12	128.57	8.81	0.0001
Task x Etype x Prof	703.38	12	58.61	6.81	0.0001

p < .05

Etype = Error type
Prof = Proficiency

The ANOVA table 2 summarizes the results for the comparative construction. The three main effects are significant.

Null hypothesis 1, Ho: there is no significant difference among the three levels of the variable proficiency, was rejected ($F=10.98$, $p>0.0001$), and therefore

we concluded that the three groups of learners do, indeed, differ in their acquisition of English.

Null hypothesis 2, H_0 : there is no significant difference based on type of task, was also rejected at ($F=466.48$ $p>0.0001$), leading us to the conclusion that there are significant differences between performance on the oral and written tasks.

Null hypothesis 3, H_0 : there is no significant difference among error types, was rejected ($F=56.03$, $p>0.0001$). There are significant differences among the error types.

All the interactions achieved statistical significance, allowing the rejection of the respective null hypotheses: the proficiency by error type interaction ($F=8.81$, $p>0.0001$), the task by error type interaction ($F=28.24$, $p>0.0001$), and the task by proficiency interaction ($F=6.12$, $p>0.0038$). So, as predicted, proficiency did have an effect on error types, on task, and task had also an effect on error types. The triple interaction, task by error type by proficiency, was also statistically significant ($F=6.81$, $p>0.0001$).

The significant error type by proficiency interaction indicates that the difference among the error types means is not constant across the subject groups. The significant error type by task interaction indicates that the difference among the error types means is not constant across the task

factor. Figures 5a and 5b below illustrate graphically the nature of the error type by proficiency interaction.

The shape of the two polygons shows that although the pattern of acquisition of comparatives in English is the same for all the groups, the three groups differ significantly in the frequency with which they produce certain error types. It can be seen, by comparing the two graphs, that the pattern differs slightly between the written and the oral tasks. These differences will be discussed in more detail later in this chapter.

The interaction shown in Figure 6 clarifies the nature of the task by error type interaction. The existence of a significant task by proficiency interaction indicates that the configuration in Figure 6 is significantly affected by the subjects' proficiency in Portuguese.

Upon rejection of the null hypotheses mentioned above, we proceeded to answer more specific questions. A Duncan's multiple range test to test for the multiple comparisons was used. This test pinpointed where the differences were. The bilinguals non-proficient in Portuguese (BNP) differed significantly from both the bilinguals and the monolinguals proficient in Portuguese (BP and MP respectively).

No differences were shown among the three levels of proficiency on error types 3 and 7 (see appendix C for a list of error types), which reflect interference from Tsonga. On error type 2, however, which also reflects

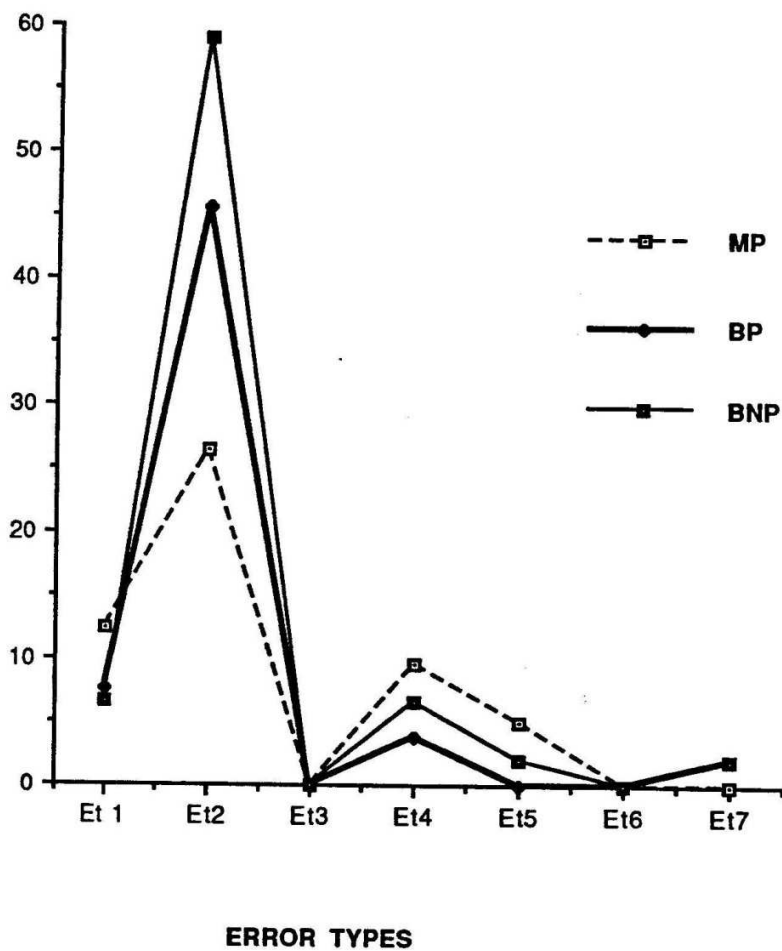


FIGURE 5a
Oral error type by proficiency interaction
 MP = Monolingual Proficient
 BP = Bilingual Proficient
 BNP = Bilingual Non-proficient

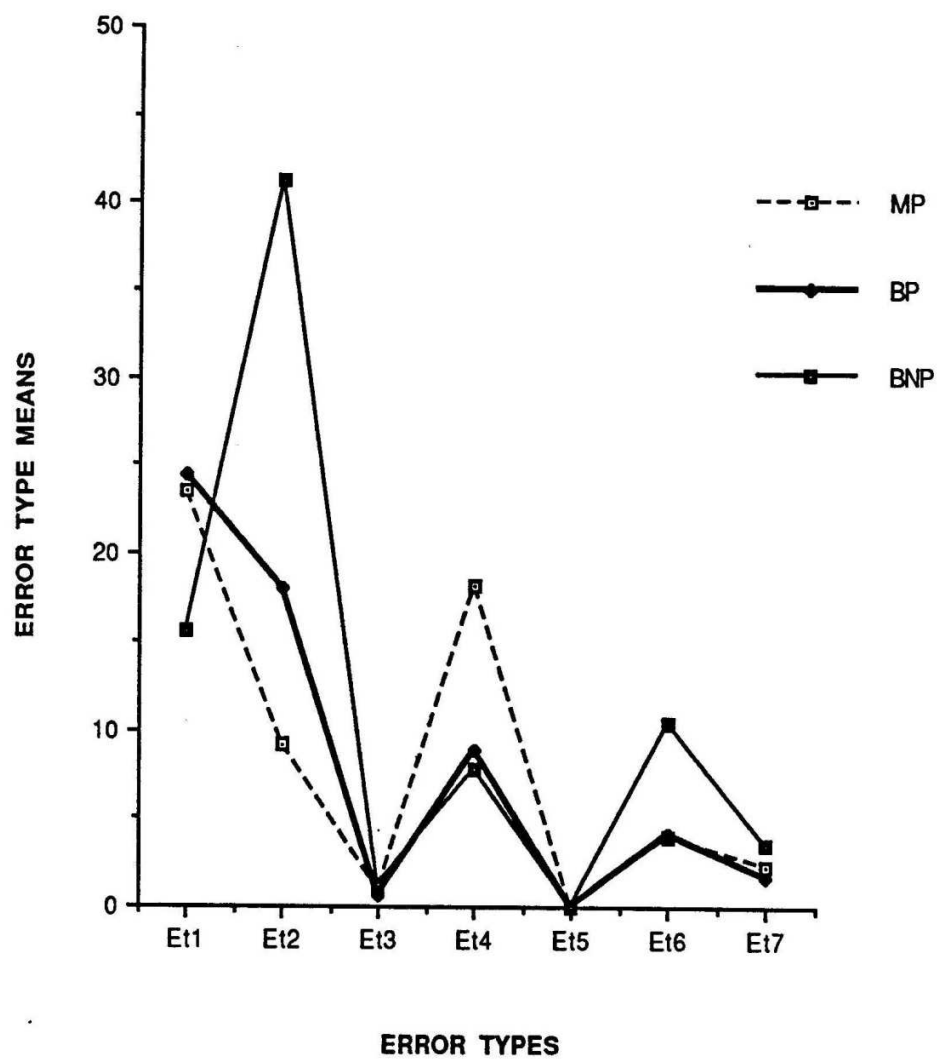


FIGURE 5b
Written error type by proficiency interaction.
 MP = Monolingual Proficient
 BP = Bilingual Proficient
 BNP = Bilingual Non-proficient

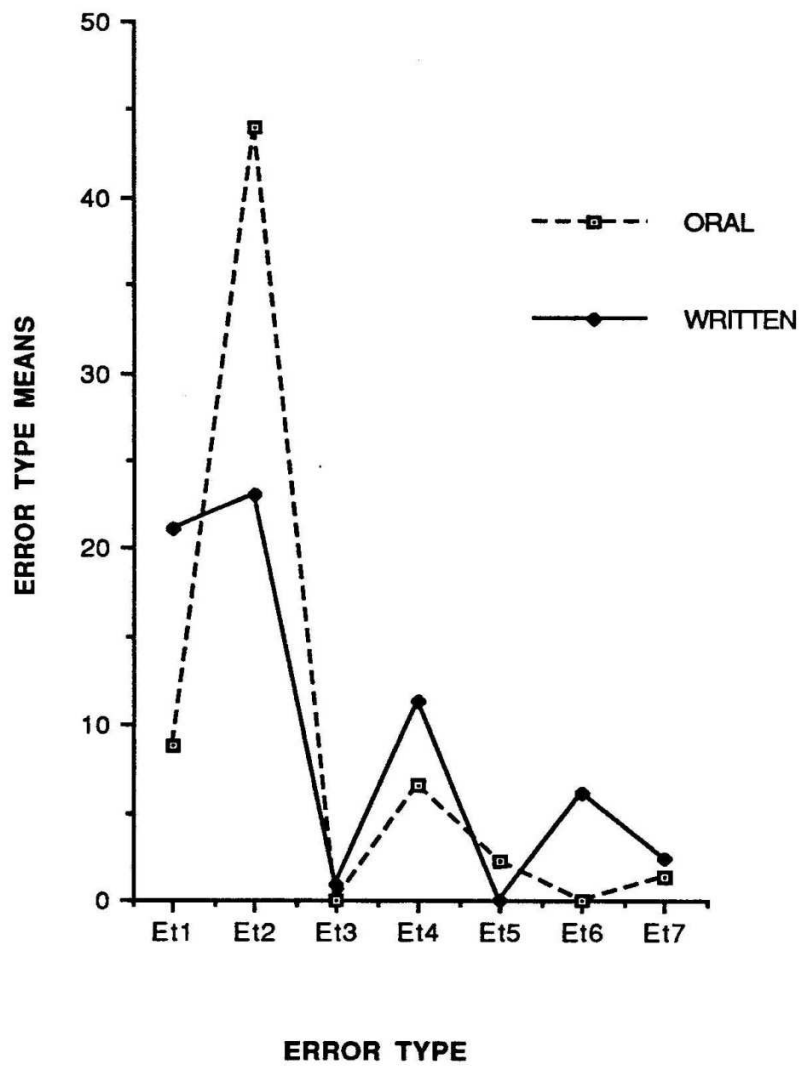


Figure 6
Task by error type interaction

interference from Tsonga, the bilingual group non-proficient in Portuguese (BNP) produced more errors (\bar{X} written=59.05, and \bar{X} oral=41.31) than the other two groups in both tasks (Appendix D). The bilinguals proficient in Portuguese (BP) performed differently in each of the two tasks: in the oral task this group did not differ significantly from either of the other two groups (\bar{X} =45.70), but in the written task it performed similarly (\bar{X} =18.09) to the Monolingual (MP) group (\bar{X} =9.12).

There was no significant difference among the three levels of proficiency for error type 1, which reflects interference from Portuguese.

On error types 4, 5, and 6, no significant difference was registered among the three levels of proficiency in the oral test; however, on the written test, there was a significant difference between BNP (\bar{X} =10.35), and the two other groups, BP (\bar{X} =4.16) and MP(\bar{X} =4.00), on error type 6 (Appendix D).

Finally, the differences between the means of the oral score and the written score for each error type was compared for the seven error types. Contrary to expectations, it was found that, in general the percentage of errors on the oral test was lower than the percentage of errors on the written test. It was also found that proficiency effect is significant only for error type 6 (\bar{X} = -10.357 BNP, \bar{X} = -4.167 BP, \bar{X} = -4.000 MP). So, BNP differs significantly from BP

and from MP, for whom the difference between written and oral tasks is smaller (Appendix E). Though, in general, the oral scores are lower than the written scores, on error types 2 and 5 the reverse of this situation is encountered; i.e., oral errors are produced more frequently, and there is no significant difference among the groups. It is important to mention here that error type 5 occurred only in the oral task. Our findings show that for all the other error types the difference between oral and written tasks did not turn out to be significant.

Table 3
Means and Standard Deviations (articles)

	Written		
	M	SD	n
BNP	10.190	5.230	21
BP	7.476	4.955	21
MP	7.000	4.266	21

BNP = Bilingual non-proficient
BP = Bilingual proficient
MP = Monolingual proficient

Table 4

ANOVA test for performance on articles

Source	SS	DF	MS	F	PR>F
Prof	15.55	2	7.77	2.66	0.0781
Etype	241.80	7	34.54	10.81	0.0001
Etype x Prof	60.35	14	4.31	1.35	0.1755

p < .05

Prof = Proficiency
 Etype = Error type

Table 4 shows no significant difference between the three groups in their use of articles in English. Null hypothesis 1, H_0 : there is no significant difference among the three levels of proficiency, was accepted ($F=2.66$, $p>0.0781$). Table 4 also shows that the error type effect is significant ($F=66.31$, $p>0.0001$), meaning that there are significant differences among error types.

Thus, in answer to our first research question, it appears that fluency in Portuguese does enhance the acquisition of English comparatives, but does not have an effect in the acquisition of articles. From the results reported in table 2 it is reasonable to think that the similarity between the structures of the languages involved is a determinant factor for language transfer. The degree of proficiency in the language that is closer to the TL seems to be another important determinant factor for transfer to occur. The results in table 4, however, seem to contradict our hypothesis. No significant differences among

the proficiency groups showed up as had been predicted. In the next section of this paper a more thorough discussion of these findings will be presented.

Discussion

1. Comparatives.

I will now proceed to a discussion of each of the individual aspects that constitute the overall result obtained in this study.

In conformity with the theory of CA, it was hypothesized that since Tsonga does not express comparatives by means of inflection nor does it have any marker placed in front of the qualifier, speakers of Tsonga might produce sentences of the type "this book is small than that book.", and "this book is good as (or like) that book." Sentences of this type were indeed produced both in Portuguese and in English by the subjects, and their performance in the English test showed a significant difference between the proficient and the non-proficient speakers of Portuguese. It is important to notice that, contrary to what had been predicted on the basis of CA, this type of sentence was also produced by the monolingual speakers of Portuguese in their English utterances, although in a very small number. This suggests that even though there was a significant difference in the performance of the three groups, we should perhaps interpret this error not just as language interference.

A close look at pidgins, not only those based on Portuguese but also English and French pidgins, shows that the omission of the adverb "more" in front of the adjective is common in those languages.

E. g. i) English Pidgins

"He big than/pass me"

ii) Creole from Cabo Verde

"Kaza di nha Marta e fomos sima di nha Tina."

(House of Mrs Marta is beautiful as of Mrs Tina.)

Studies (see Slobin 1985) on the acquisition of comparatives in other Indo-European languages such as German, and French, which use comparative constructions that are very similar to the English construction, also provide evidence that in the initial stages of language acquisition learners frequently leave out the adverb equivalent to the adverb "more" in English producing sentences like:

E.g. iii) "le chien est grand que le chat."

(the dog is big than the cat.)

This leads us to think that this error type reflects a more global cognitive process of simplification characteristic of all learners. It is a developmental error. However, the fact that this error is produced more frequently by the speakers of Tsonga, suggests that there are two processes at work simultaneously: A more general one, that of linguistic simplification and, a more specific one, that of transfer, which is employed by the learner who

already knows one or more languages and therefore, relies on knowledge of the language(s) previously known.

It is also interesting to notice that monolinguals produced more errors of the type "O Pedro é grande como o Beto" (Pedro is big as Beto) than "O Pedro é grande que o Beto" (Pedro is big than Beto). It seems that they view it as more acceptable to omit the comparative correlative particle "como" (as) than to omit the particle "que" (than). It is interesting to note that in the creole spoken in the island of "Santiago de Cabo Verde" this omission is also acceptable and very common.

Another important thing to notice in the results, is that monolinguals rarely left an empty space before the adjective. Instead they used other adverbs such as "very, much, little, small" to replace the adverb "more" or "less".

- E.g. iv) "Mr. Thompson is very fat than Mr. Smith."
v) "This book is little heavy than that one."

It appears, at first, that translation of the L1 structure into L3 is is taking place e.g. "sayi leri risasekile ngopho ka leriya", (this skirt is beautiful very/much than that one). However, monolinguals and bilinguals proficient in Portuguese also produce the same error in frequencies that were not significantly different from the group of bilinguals non-proficient in Portuguese. This forces us to discard the language transfer hypotheses,

and it leads us to consider other alternative explanations to this phenomenon. This seems to reflect incomplete knowledge of the comparative construction in English. They do know that there must be some sort of comparative particle in front of the English adjectives as there is in Portuguese but they are confused as to which is the equivalent to the Portuguese particle "mais".

Another error type produced mainly by the monolingual group was "...very more beautiful than...". As mentioned above, it seems that there is no clear relationship between meaning and form in the use of the intensifiers "very" and "much", and, therefore, it is reasonable to think that learners use the former where the latter is required.

An error that often occurred and that reflects neither the structure of L1 nor that of the L2, but was rather evidence of the process of overgeneralization of the English rule, was the following: "...more heavier than..." and "...famouser than..." these errors reflect general characteristics of language acquisition. Their origins are found within the structure of English itself.

As the results reveal, error type 7 "...pass/more than..." was not produced very frequently and there were no significant differences among the three groups in their production. Moreover, that particular error occurred with more frequency in the recognition task than in the

production tasks. We suspect that it might well be that the error was induced by the task, and, therefore, it is not an error that is actively produced by these learners. It is interesting to note that in a number of creoles a verb meaning 'pass', 'surpass' or 'exceed' is used after creole adjectival verbs to indicate comparison:

E.g. vi) Principe (a Portuguese-based creole spoken on Principe)

"rima me mays forti pasa mi."
(my brother is more strong passes me.)

This is an exact structural parallel to the serial-verb construction that is widespread in the Bantu languages, including Tsonga. Boretzky (1983) suggests that creole constructions closest to the model "big pass me" are probably the most conservative and are likely to be in the process of being replaced by structures more similar to those of the superstrates. In the Mozambican variety of Portuguese, it could have been the case that 'passa' (cf. P *passar* 'pass'), began by being used as the literal translation of the Tsonga verb "to exceed", and is now being merged semantically with "mais". This seems likely to have occurred through the alternation of "passa" and "mais" in the comparative construction. "Mais", which in Portuguese precedes the adjective is moved to the position immediately following the adjective usually occupied by the verb "to surpass".

1.1. Additional Findings

A number of other interesting results appeared. Although not enough of these errors were produced to justify a statistical analysis, they are worthy of comment.

A very peculiar utterance was produced consistently by some of the bilinguals non proficient in Portuguese, and by two subjects who reported themselves monolingual in Portuguese but whose performance in the Portuguese test revealed them not to be proficient in that language. A euphonic vowel "a" was systematically placed in front of the adjective in the following manner "this chair is a comfortable than". Although this occurred with more frequency in oral responses, it also occurred in some written responses. It is known that in several Bantu languages, Tsonga included, the vowel "a" is prefixed to nouns, pronouns, adverbs, adjectives or at the beginning of sentences and in front of certain auxiliary verbs. It is suspected that the reason for the use of "a" by these learners is that, in a moment of hesitation, they fill the gap with the euphonic vowel which is used in their L1 for an identical purpose. This also seems to provide evidence for language transfer.

Although an analysis of production- vs.-recognition tasks was not initially planned, it is interesting to notice that a considerably greater number of errors was produced in the recognition tasks, even by the proficient speakers of

Portuguese. This is understandable and confirms the general belief that native speakers or those who learned a language at an early age do not necessarily know the rules. This happened with error types 7 "...pass/more than..." and 6 "...more...-er...". The subjects may have been led to produce this error by the task, and they accepted it as correct even though in their production they did not use that form. This suggests that their performance does not match their competence.

There were several hesitations, false starts, that were generally retraced. This seems to be evidence of the "editing" process these learners go through before producing sentences. This process was also manifested in the written test; some subjects made several wrong choices consistently but erased them (not well enough to prevent the researcher from seeing what the first choice had been). This proves that they know the rule; but if they are not monitoring their speech or writing, they produce errors; and some of these errors are a reflection of their L1 or L2. These mistakes were not counted as errors in our analysis, but they provide convincing evidence that L1 interferes with L2 and L3, and L2 interferes with L3.

Although a statistical test was not run on the data gathered from the test in Portuguese (this study deals mainly with the acquisition of English), one particular error in Portuguese is worthy of comment, because it gives

an insight to the Portuguese variant that has started to emerge in Mozambique. In addition to that, this error type is particularly interesting, because it is beginning to occur also in English utterances, although to a lesser degree. Mozambicans, across the three levels of proficiency, produced sentences of the type

"Ø/tão/muito/pouco/menos/...em relação a..."

"Ø/as/very/little/less/...in relation to..."

I propose two explanations to this problem: it might just be a long translation of the Tsonga comparative particle "ka". Another possible explanation to this widely spread way of comparing things might be that because the expression "em relação a" fulfills a purpose very similar to that expressed by forms like "mais/menos...que" (more/less...than), "tão...como", (as...as), it is reasonable to think that the speaker who is not aware of the nuances in the use of each of the forms, might use them interchangeably. On the basis of a quick and superficial look at Portuguese based creoles, and at the non-standard variations of other Portuguese speaking communities in Africa, (e.g. Angola), in Europe, (Portugal), and in South America (Brazil), it was found that people do, indeed, use this expression to compare two things; and some of them have completely done away with the other, more common, comparative construction. They opted to use "em relação a", thus producing a simplified form by

replacing two forms with one which seems to fulfill the same purpose effectively.

To support this hypothesis we examined the utterances of 39 subjects to whom the test was administered at the University Eduardo Mondlane in the city of Maputo, but whose tests were not included in the main data for this study.⁽¹⁰⁾ Twenty two of these subjects used the expression "em relação a" interchangeably with the more common comparative construction "mais... do que". It is important to notice that the ages of these 39 subjects ranged from 18 to 35, and that of the 22 subjects who used the expression "in relation to" in contexts where the comparative construction was required 20 were between ages 18 and 23 and only 2 were older (both 27 years old). None of the older students produced that error. We seem to be dealing here with an expression that is mainly used by the younger generation. As happened with the secondary school students, the error was produced across the three groups (monolingual, bilingual proficient in Portuguese and bilingual non-proficient in Portuguese) and it was produced with more frequency in Portuguese than in English. Although this information should not lead us into hasty conclusions, it is important to notice these findings which seem to reflect a phenomenon that deserves some serious study, that of language development. It is also obvious that the phenomena of simplification, overgeneralization and inference are at work

in this case. The question that remains to be answered is: what is the motivation for that simplification? It could be that it was initiated by the speakers of Tsonga who, faced with the difficulties intrinsic in their acquisition of the Portuguese comparative structure, opted for the use of the "easier" construction, i.e. closer to the way comparisons are expressed in Tsonga. As indicated earlier, the direct translation of the meaning of the particle "ka" in Tsonga is "in relation to". As a consequence of this "decision" and considering the fact that the Mozambican monolinguals are becoming gradually less exposed to the standard variety of Portuguese spoken in Portugal, and until recently spoken in Mozambique, they are prone to subconsciously starting to adopt the neologisms that appear in the language, some of which have their origin in transfer from L1.

2. Articles

Only the results on the written data have been analyzed because the oral test did not elicit the use of articles in any consistent way. This was due to the fact that the prompts consisted of pictures; and, therefore, subjects naturally felt more inclined to use demonstratives instead of articles to identify the objects in the pictures. In other words, the elicitation task itself might have led them to use demonstratives instead of articles.

The errors presented in appendix C were commonly produced by all three groups, and, as indicated (table 4), there was no significant difference among the groups in their production of these particular errors.

Some of these errors do not reflect either L1 or L2; and, therefore, they can not be classified as interference errors. Others that seem to reflect L1 as, for example, error type 1, were also produced by monolingual speakers of Portuguese in their English utterances. In an attempt to provide an explanation for these error types, we looked at research from other languages, and found out that these error types are also common in Pidgins and Creoles. In Papiamentu, the creole spoken on Curaçao, the use of articles is very unpredictable and inconsistent. Sometimes it is omitted where Portuguese or Spanish would require one. Universal principles, independent of language background would probably offer the best explanation for this phenomenon. This is what could be happening in the minds of the learners:

(1) since in some cases one of the elements in the sentence has already been identified as definite, they feel that there is no need to define the other element. It is implicit in the utterance whether the other element is definite or indefinite.

(2) they could just be confused about the English article system which is different from that of their L1 and

L2. As explained earlier, the English article system is more marked than the Portuguese one, and even more marked than the Tsonga system, which does not use articles. Therefore, confusion and inconsistencies are prone to occur in the speech of these learners.

In sum, articles were as problematic for these subjects as for other subjects reported in the literature, and language background did not seem to affect these subjects' performances. Inconsistency of use and inappropriate use of articles was found across all groups.

Observational studies of L1 acquisition of some Romance languages and of English suggest that the ability to use definite and indefinite articles appropriately may take six years or more (Eve Clark, 1985; Bresson, et al., 1970, Warden, 1976). It seems that this delay in the acquisition of articles is the result of children's failures to realize that their addressees do not necessarily know all that they, as speakers, know; and learning how to assess what is mutual knowledge and what is not, and from that, being able to decide on the appropriate article to use is very complex. In other words, it requires a cognitive level which these children have not yet reached.

The subjects in this study, however, are adults. They have the conceptual maturity to tell the specific from the non-specific, so we can not offer the same explanation for their inappropriate use of articles. However, the link between language and concepts remains a major problem for

these learners, since the target language sometimes requires the learner to develop an awareness for new concepts and distinctions, as happens to these speakers of Tsonga when they learn an Indo-European language. This is, to a certain extent, also required of the Portuguese monolinguals because the Portuguese and English article systems do not completely match. Previous studies have indicated that the acquisition of the English article system by speakers of other languages was affected by their L1. Hakuta (1974) noticed that articles were acquired considerably late by a Japanese five-year old girl. Similarly to what happens with Tsonga, in Japanese grammar the notion of specificity and nonspecificity is not expressed by articles. He makes the point that, if this is the reason for their late acquisition, it means that the mother tongue has a greater influence than has been suggested by other studies. This is also suggested by Fathman's study (1979) in which Korean and Spanish learners showed significant differences in acquiring the articles. The Spanish learners did not take as long to acquire the use of articles in English. These reported studies suggest that perhaps the elicitation task in the present study was not sensitive enough to detect differences among the subjects, but differences might exist; and, therefore, a more sensitive instrument should be designed and the study should be replicated.

We conclude this chapter by recognizing that the concept of learners' 'psychotypology' developed by Kellerman (1977, 1979, 1983) is helpful in accounting for the results on the acquisition of comparatives by these learners. As mentioned earlier in the literature review, part of the learner's psychotypology involves the learner's perceived 'distance' between the native language, and languages known and the target language, at least for a particular local domain, e.g. syntax. This perceived distance often changes as proficiency changes. The origins of the learner's psychotypology are many, including experience with the target language, actual linguistic typology, a learner's own psychological organization of the native language, and other languages the learner is familiar with. The more closely related the NL and the TL are in the learners' psychotypology, the more likely the NL is to affect TL use. Thus, based on Kellerman's hypothesis and on the results presented above, we can conclude that the syntax of comparative construction in Portuguese affects the English language performance of bilingual proficient speaking learners more than does the syntax of Tsonga. The findings on the comparative construction are somewhat consistent with the predictions made on the basis of the CA theory. The hypothesis set forth in this study, that knowledge of an Indo-European language (Portuguese in this case) would facilitate the process of acquisition of English by these

learners, and therefore, the group of bilinguals proficient in Portuguese (BP) would have an advantage over the group of bilinguals non-proficient in Portuguese (BNP) was confirmed. The confirmation came from the fact that the BP produced considerably fewer L1 interference errors than the BNP group. The results on the acquisition of articles are also consistent with the predictions made by the CC theory and the theories of Nativization and Pidginization to the extent that evidence is provided that indicates that there were no differences among the three groups in their patterns of acquisition and most of the errors produced did not reflect either L1, L2 or L3.

The study seems also to support the claim set forth at the beginning of this thesis that L2 acquisition is qualitatively different from L3 acquisition. The fact that monolinguals performed differently from bilinguals non-proficient in Portuguese in, at least, one of the linguistic aspects being studied (comparative construction), and the fact that bilinguals proficient in Portuguese (BP) performed differently from bilinguals non-proficient in Portuguese (BNP) and similarly to the monolingual speakers of Portuguese (MP), supports the hypothesis that the languages known previously by the learners have a great role to play in their acquisition of another language. Transfer seems to be an active strategy employed by all the learners in this study. Proficiency in Portuguese seems to be the main

factor for the difference between the two bilingual groups in their acquisition of English. We can conclude, therefore, that the term "Second Language Acquisition" should not be used as a generic term to refer to the acquisition of all languages other than L1. Numerous factors contribute to the differences in the processes of language acquisition. Two important factors revealed in the present study are: distance between or among the languages involved, degree of proficiency in the language closer to the TL. There are also differences influenced by factors in the human perceptual and cognitive apparatus and processing capabilities. Some studies (e.g. Nation and MacLaughlin 1986) have suggested that multilinguals learn grammar significantly better than bilinguals or monolinguals when the instructions call for implicit-learning, but not when the instructions call for explicit-learning. This suggests that the more experience with languages, the better the ability to abstract structural information from linguistic stimuli under conditions where they are simply exposed to examples with no instructions to learn the material or derive underlying rules. Ben Zeev (1977) has argued that bilingual subjects develop a more analytic orientation towards language than do monolingual subjects as a means of overcoming interference between languages. Zeev's argument was that bilinguals, because they need to deal with two languages rather than one, habitually exert more processing

effort in making sense out of verbal stimuli than do monolinguals.

The superior performance in this study of the monolingual group and the group of bilinguals proficient in Portuguese over the group of bilinguals non-proficient in Portuguese on some of the error types seems to support Zeev's argument, that bilinguals exert more processing effort in language learning than do monolinguals, and that might be the reason why they seem to have more difficulties with the new language. This processing effort is reduced considerably for the bilinguals proficient in Portuguese (L2) because their L2 is similar to L3.

CHAPTER 5

CONCLUSION

The major questions addressed in this paper were answered. Evidence was provided that L2 and L3 acquisition are qualitatively different. The learners in each of these three groups are ignorant of the TL pattern, know a common language (Portuguese), and yet their learning difficulties and errors proved to be different. We would be unable to say more about their ignorance unless we invoked interference theory. The language background of these learners plays an important role in their English-language acquisition and transfer does indeed occur. Which language gets transferred depends on factors like the distance between the languages involved, and the proficiency of the learners in each of those languages, especially in the language closer to the TL.

It must also be recognized that, irrespective of where the difficulty lies, be it in the L3 (e.g. obscure usage of articles in English), or the L1 (e.g. absence of articles), or even in the L2, learners seem to rely on the same cognitive strategy: that of using their knowledge of previously known languages and transferring what, in their view point, can be transferred. These processes of simplification, regularization, overgeneralization, reduction of redundancy, whether conscious or otherwise, appear to be dominant factors in early language acquisition,

be it Pidginization, L1, L2 or Ln acquisition. At this point, learners seek to override the evidence of the input by constructing an internal representational system that is more simple than the input, relying on both the languages previously known, and on universal principles.

Even though it is known that not all the speakers of a language will have exactly the same amount of difficulty with each problem, in this study the problems were quite stable and predictable for each language background, at least on one of the structures (comparatives). Although some errors could be traced back to the learners' L1 or L2, the subjects in this study also showed a tendency to proceed along lines that are common to all language learners. These two tendencies are not mutually exclusive, and as was expected, they were both manifested by all subjects in this study.

These findings, while contributing to our knowledge of the particular processes involved in language development, also have important implications for the general theory of language acquisition. Today, as in the 60's, both linguistics and psychology are in a state of what Chomsky (1966) has called "flux and agitation". The question of how language is acquired is still the subject of extensive debate. The lack of well-defined and broadly accepted criteria for establishing which grammatical utterances are the result of transfer is a major issue in attempts to

determine the causes of errors. In particular, interference errors are difficult to distinguish from developmental errors. For example, omission of the article is common in the L1 acquisition of English and according to some linguists (e.g. Ellis, 1985b) is best considered developmental. However, the different performance of monolinguals and bilinguals non-proficient in Portuguese in the present study, provides evidence that some of the errors are not only developmental errors but also errors of interference. This was the conclusion reached, for example, for the omission of the adverb "more" in comparisons, and for the use of the definite article in front of proper names. It is evident that one of the practical problems in this study was that of assigning errors to the categories listed in Appendix C. It was also impossible to provide one sole explanation for the causes of these learners' errors. Therefore, one obvious conclusion to draw from this fact is that although the results of this study indicate that interference plays a considerable role, language universals and analysis of the complexities inherent to the languages involved also offer insights and can explain the linguistic behavior of our subjects.

I hope that this study will shed some light on the problem of acquisition of the English language by Mozambican students, and that it will stimulate further study along similar lines. The number of subjects and structures being

studied is limited, and we are aware that considerable individual differences exist among persons acquiring any given language. However, the study is exploratory in nature and gives us only a minimal view of the process of acquisition of English by these learners. Such studies bear implications that can support language planning policies and the development of teaching methodologies, both of which are current issues of paramount importance to multilingual countries.

The existence of students from diverse language backgrounds in a classroom makes the process of teaching English in Mozambique a very complex and challenging task. One of the aims of this paper is to determine the implications of the findings for the teaching of languages in Mozambique. As Ngunga (1987) says, "it is scientifically proven, and the Mozambican experience confirms it, that a teaching methodology in a second language can not be successful if the learners' mother tongue is not taken into consideration" (p. 68). This statement presupposes that the native languages are scientifically studied and developed, along with Portuguese in Mozambique. Much more research is needed on the acquisition of languages in Mozambique. The data based on the acquisition of English is rich and varied, and it is growing at a rapid rate, whereas in the Romance languages, and to a worse extent, in the Bantu languages, it is very sporadic.

SUGGESTIONS

A legitimate question to put forward at this point would be: what do the results of a study like the present one have to offer to other areas of linguistics, language education, methodology of language teaching, language planning and language policies?

The linguistic heterogeneity of the Mozambican society poses problems for language planners, in formulating, elaborating, and implementing language policies. Amidst this complexity, the government, through the Ministry of Education and the educational system, is enforcing a language policy which it believes to be the best at this point in the nation's history. Portuguese is the national language, since it is recognized as the symbol of national unity, and at the same time the native languages are used in daily communication. English is a language of wider communication for interaction with other countries of the world.

In view of this situation the following suggestions are put forward. They are not solutions for all the problems but will give some insights on how to tackle the problems of elaborating language policies and teaching languages in Mozambique, in particular the teaching of English. This kind of study should be replicated and extended in a number of directions before definitive conclusions can be drawn. My first suggestion for further work deals with the

analysis of the interlanguages of the Mozambican learners. One such study could be to test the differences in achievement in given error types between Portuguese and English. It would be interesting to know whether the frequency with which the same error type is produced both in Portuguese and in English, by the same subjects, varies significantly between the two languages.

Another issue for further study is that of integration. Although it is perfectly legitimate to select certain variables for intensive study, we also need a more integrated look at the entire process of second- and third- language learning. Therefore, some studies should incorporate phonology and prosodic feature analyses with analyses of syntax and semantics. This will undoubtedly enable us to gain a deeper understanding of the entire communication system which these particular learners are developing.

This study could also lead to a more thorough look into the issue of language interference and consideration of other probable causes for the errors produced. It would be particularly interesting and enlightening to test for the usage of the construction "in relation to" in English by more advanced learners. As was mentioned in the discussion of the results, it is believed that inferencing is one of the strategies being employed by these learners when they use the expression "em relação a" to replace the standard

way of comparing two things in Portuguese. Since inferencing is a strategy that predominates in later stages of language acquisition as learners transit from an internal to an external norm, and as they switch from reliance on simplification and reduction to replacement and restructuring strategies, it is logical to speculate that research with learners at a more advanced level would yield revealing results about their English performance which might be different from the results obtained in this study. A comparison of the results obtained here with other studies already carried out in this area of investigation would be particularly interesting, and would bolster the argument that perceived distance between the languages is one of the determinant factors for transfer to occur. The argument that transfer should be looked on as a cognitive process in which decisions are made on the basis of (1) the learner's perception of the similarity between L1 and any previously learned language structures, and (2) the degree of markedness of the L1 structure, and that transfer is predicted to occur when the perceived similarity between the two languages is great and when the structures involved are marked, is supported by a number of studies (Gass 1979; Jordens 1977; Rutherford 1982).

It is important to know what happens when:

a) $L1 \neq L2 \neq L3$

b) $L1 \neq L2 \neq L3$

The study should also be replicated with speakers of the other native languages spoken in Mozambique.

One final suggestion concerns the acquisition of the English article system. It is important that further studies use more accurate elicitation procedures to examine the acquisition of the English article system by these learners, so that the possible effects of L1 might be more adequately explored than was possible in this study.

Portuguese speaking countries, particularly the five African countries, Mozambique, Angola, Cabo Verde, Sao Tome e Principe, and Guine Bissau, will profit from the exchange of national experiences and information on this crucial subject of language. Even though each country will have to face its problems in its own and unique way, it is certainly very useful to learn from each other's experiences and gain some insights on how they cope with such problems in their own contexts within their objectives and aspirations of nation-building.

There is also the need for a periodically conducted reevaluation of the language policy in Mozambique. Careful reflexion is needed about the future of the Mozambican languages, and the role of these languages, along with Portuguese and English in the Mozambican society. Studies like this will provide a scientific basis for a clear, coherent, and appropriate linguistic policy to a multilingual situation like the one in Mozambique.

It will be important to work toward a policy that defines priorities as to which language or languages need prior investigation, a policy that allows for an improved quality in language teaching in Mozambican schools.

The four-year Iloilo experiment has proved that "two second languages are best introduced simultaneously right at the start of the child's education, but with the medium of instruction for the content subjects being in his first language" (Sibayan in Fishman, 1974, p. 238). Perhaps Mozambican language planners should evaluate the successful experiences that other countries have had in teaching second and third languages simultaneously and consider the pros and cons of adopting such a policy in Mozambique.

There is no doubt that variations from language to language in the surface representation of more or less universal deep features are something of a problem for learners. Perhaps a cognitive code theory that sees Portuguese and English as belonging to a common structure, and emphasizes those similarities which are not self-evident before pointing up negative interference or transfer would be better suited to this type of learners. This conscious or active knowledge of the points of interference between the two languages might be given some empirical support by the following remarks by Carroll (1966). He reminds us that "the frequency with which an item is practiced per se is not as crucial as the frequency with which it is contrasted with

other items with which it may be confused" (p. 104). Carroll also advocates that conscious attention to the critical features of a learning skill seems to facilitate learning. Therefore, a possible solution to the problem could be to try to minimize the differences and take advantage of the parallels by consciously showing these parallels and differences to the learners. It is a fact that second and third language acquisition are more similar to each other and more different from first language acquisition:

- (i) in both L2 and L3 acquisition the individual's cognitive development is at a later and more advanced stage;
- (ii) he is already in possession of the grammatical structure of a language which may (or may not) serve to facilitate the acquisition of the L2 and L3 through transfer.
- (iii) he already possesses concepts and meanings, the problem being one of expressing them through a new vocabulary, and sorting out the grammatical aspects in which the languages differ.

Thus, the rational learner of English, can profitably be shown that structures such as "adverb + adjective + correlative particle", for instance, apply to both Portuguese (mais...do que) and English (more...than). It is clearly a kind of economy of notational conventions if a language utilizes the same surface representation of a

certain grammatical aspect as in a language the learner already knows. These suggestions for the implementation of a cognitive approach are abreast of current thinking with regard to research in linguistics and psycholinguistics. They take into account findings from other experiments as well, and it would seem that the broader base of a cognitive-code theory of language learning might represent a reasonable framework for the implementation of a foreign- language program.

To implement such a program trained, teachers will be needed. A teacher-training curriculum should include a course on the structure of the Bantu languages in general; and if possible, the teachers should be proficient in the three languages (the particular Bantu language spoken in the region, Portuguese and English).

In sum, more research is needed on the basic disciplines which underlie English language teaching, particularly with the view to bringing together theoretical insights from these disciplines into a worthwhile interdisciplinary endeavor. There is a place in the Mozambican society for all these languages. They are all important. The question is: how to enable Mozambicans to acquire them with ease and use them efficiently? This study has shown that proficient speakers of Portuguese performed better than non-proficient speakers of Portuguese in at least one of the structures investigated, giving support to

the hypothesis that knowledge of Portuguese is facilitative of the acquisition of English. Given the fact that Portuguese is, and will most likely remain the official or, at least one, of the official languages in that country, and given the fact that English is also needed, improving the quality of the teaching of Portuguese seems to be an important priority. Studies of the acquisition of Portuguese by native speakers of Bantu languages need to be carried out to help in choosing the best methodologies. The results of this study suggest that the process of matching the two languages is not always made "automatically", but it rather needs to be "triggered", i.e., the learners need to develop skills that will enable them to make judgments about which source language should be used as the basis for constructing utterances in the target language. Teaching methodologies should take this into consideration.

A word of caution should be raised here. There were some intervening variables that have not been measured or manipulated. For example, (1) frustration (the test was too long and tedious. The students became tired and frustrated and left some of the items unanswered). (2) subjects self-reported their language background. For prestige reasons they may have hidden the fact that they speak a native language. An interesting sociolinguistic phenomenon taking place in Mozambique is the fact that Portuguese is still considered the language of prestige and therefore, parents

who do not master it speak to their children in that language and prevent them from learning the native languages. The result of this situation is that some of those who claim to be monolingual speakers of Portuguese are not proficient in that language.

The next few years will probably see a broader approach in trying to come up with explanations to the ways bilinguals and multilinguals acquire language.

BIBLIOGRAPHY

- Andersen, R. (1981). Two perspectives on pidginization as second language acquisition. In R. W. Andersen (Ed.), New dimensions in second language acquisition research (pp.165-96). Rowley, MA: Newbury House.
- Andersen, R. (1983). Introduction: a language acquisition interpretation of pidginization and creolization. In R. W. Andersen (Ed.), Pidginization and creolization as language acquisition (pp.1-56). Rowley, MA: Newbury House.
- Ben Zeev, S. (1977). The influence of bilingualism on cognitive strategy and cognitive development. Child Development, 48 , 1009-1018.
- Bickerton, D. (1971). Inherent variability and variables rules. Foundations of Language, 7, 457-92.
- Bickerton, D. (1973). On the nature of a creole continuum. Language, 49 , 640-9.
- Bickerton, D. (1977). Pidginization and creolization: language acquisition and language universals. In A. Valdman (Ed.), Pidgin and creole linguistics (pp.49-69). Bloomington: Indiana University Press.
- Bickerton, D. (1981). Roots of language. Ann Arbor, MI: Karoma.
- Bickerton, D. (1983). Comments on Valdman's Creolization and second language acquisition. In R. W. Andersen, (Ed.), Pidginization and creolization as language

- acquisition (pp.235-240). Rowley, MA: Newbury House.
- Bickerton, D. (1984). The language bioprogram hypothesis and second language acquisition. In W. E. Rutherford (Ed.), Language universals and second language acquisition (pp.141-161). Amsterdam: John Benjamins.
- Bickerton, D., & Odo, C. (1976). General phonology and pidgin syntax. Vol. 1 of Final report on National Science Foundation Grant No. GS-39748 (unpublished).
- Bloomfield, L. (1933). Language. New York: Holt.
- Boretzky, N. (1983). Kreolsprachen, substrate und sprachwandels. Wiesbaden: Otto Harrassowitz.
- Bresson, F., Bouvier, N., Dannequin, C., Depreux, J., Hardy, M., & Platone, F. (1970). Quelques aspects du systeme des determinants chez les enfants de l'ecole maternelle: Utilisation des articles defini et indefini. Centre de Recherche de l'Education Specialisee et de l'Adaptation Scolaire (Institut Pedagogique National, Paris), 2, 3-40.
- Brown, Roger (1973). A first language. Cambridge, Mass.: Harvard University Press.
- Carroll, J. B. (1966). The Contributions of Psychological Theory and Educational Research to the Teaching of Foreign Languages. In A. Valdman (Ed.), Trends in language teaching (pp.93-106). New York: McGraw-Hill Book Company.

- Chomsky, N. (1965). Aspects of the theory of syntax. Cambridge, Mass.: MIT Press.
- Chomsky, N. (1966). Linguistic Theory, 1966 Northeast Conference. In R. G. Mead, Jr. (Ed.), Reports of the Working committees (pp.43-49). Menasha, Wisconsin: George Banta Company.
- Clark, E. V. (1985). The Acquisition of Romance Languages, with Special Reference to French. In D. I. Slobin (Ed.), The crosslinguistic study of language acquisition, vol 2, (pp. 687-782). Hillsdale, N. J.: Lawrence Erlbaum.
- Cook, V. J. (1985). Universal grammar and second language learning. Journal of Applied Linguistics, 6, 2-18.
- Corder, S. P. (1967). The significance of learners' errors. International Review of Applied Linguistics, 5, 161-9.
- Corder, S. P. (1978a). Language distance and magnitude of the learning task. Studies in Second Language Acquisition, 2, 27-36.
- Corder, S. P. (1978b). Language-Learner Language. In J. C. Richards, (Ed.), Understanding second and foreign language learning: Issues and approaches (pp.71-90). Rowley, Mass.: Newbury House Publishers.
- Dulay, H. C. and Burt, M. K. (1972). Goofing: an indicator of children's second language learning strategies, Language Learning, 22, 235-252.

- Dulay, H. C. and Burt, M. K. (1973). Should we teach children syntax? Language Learning, 23, 245-258.
- Dulay, H. C. and Burt, M. K. (1974). A new perspective on the creative construction process in child second language acquisition. Language Learning, 25, 253-278.
- Dulay, H. C. and Burt, M. K. (1975). Creative Construction in second language learning and teaching. Language Learning, 4, 65-79.
- Eckman, F. R. (1977). Markedness and the contrastive analysis hypothesis. Language Learning, 27, 315-330.
- Eckman, F. R. (1985). Some theoretical and pedagogical implications of the markedness differential hypothesis. Studies in Second Language Acquisition, 7, 289-307.
- Ellis, R. (1985a). Sources of variability in interlanguage. Applied Linguistics, 6, 118-131.
- Ellis, R. (1985b). Understanding second language acquisition. Oxford: Oxford Press.
- Ervin-Tripp, S. (1974). Is second language learning like the first? TESOL Quarterly, 8, 111-27.
- Fathman, A. (1975). Language background, age and order of acquisition of English structures. Paper presented at TESOL, Los Angeles, California.
- Fathman, A. (1979). The value of morpheme order studies for second language learning. Working Papers in Bilingualism (Toronto), 18, 180-199.

- Faerch C. (1984). Giving transfer a boost: developmental aspects of learners' IL performance. Scandinavian Working Papers on Bilingualism, 2, 1-22.
- Felix, S. (1980). Second language development: Trends and issues. Tübingen: Narr.
- Flick, W. (1980). Error types in adult English as a second language. In B. Kettermann, and R. St. Clair (Eds.), New approaches to language acquisition (pp.57-63). Heidelberg: Julius Groos.
- Fitzgerald, W. A. (1980). Nativization and second language acquisition: A study of negation. Unpublished Master's thesis, Southern Illinois University, Carbondale.
- Flynn, S. (1983). Similarities and differences between first and second language acquisition: setting the parameters of universal grammar. In D. R. Rogers, and J. A. Sloboda (Eds.), Acquisition of symbolic skill (pp.485-500). New York: Plenum.
- Flynn, S. (1987). Contrast and construction in a parameter-setting model of L2 acquisition. Language Learning, 37, 19-62.
- Fries, C. (1952). The structure of English: An introduction to the construction of English sentences. New York: Harcourt Brace.
- Frith, M. B. (1977). Second language learning: A study of form and function at two stages of developing

- interlanguages. Bloomington, Indiana: McGill University Press.
- Gass, S. (1979). Language Transfer and Universal Grammatical Relations. Language Learning, 29, 327-344.
- Gass, S. (1984). A review of interlanguage syntax: language transfer and language universals. Language Learning, 34, 115-132.
- Gilbert, G. G. (1979). Comments on Andersen 1979. Paper given at the Colloquium on Second Language Acquisition and Use Under Different Circumstances. TESOL Annual Convention, Boston MA, February 27-28.
- Gilbert, G. G. (1981). Discussion of 'Two perspectives on pidginization as second language acquisition'. In R. W. Andersen (Ed.), New dimensions in second language acquisition research (pp.207-13). Rowley, MA: Newbury House.
- Grauberg, W. (1971). An error analysis in the German of first-year university students. In Perren and Trim (Eds.), Applications of linguistics (pp.257-263). Cambridge, U.K.: Cambridge University Press.
- Hakuta, K. (1974). A report on the development of grammatical morphemes in a Japanese girl learning English as a second language. Working Papers in Bilingualism (Toronto), 3, 18-44. Reprinted in Hatch, 1978.

- Hulstijn, J. and Hulstijn, W. (1984). Grammatical errors as a function of processing constraints and explicit knowledge. Language Learning, 34, 23-43.
- Hyltenstam, K. (1982). Language typology, language universals, markedness, and second language acquisition. Paper presented at Second European-North American Workshop on Cross-linguistic Second Language Acquisition Research, Gornsdorf, W. Germany.
- Jacobs, R. A. and Rosenbaum, P. (1968). English transformational grammar. Waltham, Mass.: Blaisdell.
- Jakobovits, L. (1970). Foreign language learning. Rowley, Mass.: Newbury House Publishers.
- James, C. (1980). Contrastive analysis. London: Longman.
- Jordens, P. (1977). Rules, grammatical intuitions and strategies in foreign language learning. ISL, 2, 25-77.
- Jordens, P. (1980). Interlanguage research: interpretation or explanation? Language Learning, 30, 195-207.
- Jordens P. and Kellerman E. (1981). Investigations into the strategy of transfer in second language acquisition. In J. J. Savard and L. Kaforge (Eds.), Acts du 5ième congrès international de linguistique appliquée (pp.195-215). Quebec: Les Presses de L'Université Laval.
- Keenan, E. L. and Comrie, B. (1977). Noun Phrase accessibility and universal grammar. Linguistic Inquiry, 8, 63-99.

- Kellerman, E. (1974). Elicitation, lateralisation and error analysis. York Papers in Linguistics, 4, reprinted in interlanguage Studies Bulletin, Utrecht, 1(1), 1976.
- Kellerman, E. (1977). Towards a characterization of the strategy of transfer in second language learning. Interlanguage Studies Bulletin, 2, 58-146.
- Kellerman, E. (1979). Transfer and non-transfer: where we are now. Studies in Second Language Acquisition, 2, 37-58.
- Kellerman, E. (1983). Now you see it, now you don't. In Gass, S. and Selinker, L. (Eds.), Language transfer in language learning (pp.112-319). Rowley, MA: Newbury House.
- Kohn, K. 1986. The Analysis of Transfer. In E. Kellerman and M. Sharwood Smith (Eds.), Crosslinguistic influence in second language acquisition (pp.21-34). New York: Pergamon Press.
- Krashen, S. (1977). The Monitor Model for second language performance. In Burt, M., Dulay, H. and Finocchiaro, M. (Eds.), View points on English as a second language (pp.152-161). New York: Regents.
- Krashen, S. (1978). Individual variation in the use of the Monitor. In Ritchie, W. (Ed.), Principles of second language learning (pp.175-183). New York: Academic Press.

- Kumpf, L. (1982). An analysis of tense, aspect, and modality in interlanguage. Paper presented at TESOL Meeting, Honolulu.
- Lado, R. (1957). Linguistics across cultures: Applied linguistics for language teachers. Ann Arbor, Michigan: University of Michigan Press.
- Lee, W. 1968. Thoughts on Contrastive Linguistics in the context of language teaching. In J. Alatis (Ed.), Contrastive linguistics and its pedagogical implications (pp.185-194). Washington D. C.: Georgetown University Press.
- Lightbown, P. M. 1984. Great expectations: second-language acquisition research and classroom teaching. Applied Linguistics, 6, 173-189.
- Linde, R. (1971). A diagnosis of grammar errors made by Japanese persons speaking English. Ph.D. dissertation, American University.
- Littlewood, W. (1984). Foreign and second language learning. Cambridge, U.K.: Cambridge University Press.
- Lott, D. (1983). Analysing and counteracting interference errors. ELT Journal, 37, 256-261.
- Mansny, D. (1987). The Role of Language and Cognition in Second Language Metalinguistic Awareness. In J. P. Lantolf and A. Labarca (Eds.), Research in second language learning: Focus on the classroom (pp.59-73). New Jersey: Ablex Publishing Corporation.

- Maratosos, M. (1971). The Use of Definite and Indefinite Reference in Young Children. Ph.D. dissertation. Cambridge, Mass.: Harvard University.
- Mazurkewich, I. (1983). Syntactic markedness and language acquisition. Paper presented at TESOL Convention, March 1983, Toronto.
- Mazurkewich, I. (1984). The acquisition of the dative alternation by second language learners and linguistic theory. Language Learning, 34, 91-109.
- McLaughlin, B. (1978). Second language acquisition in childhood. Hillsdale, N. J.: Lawrence Erlbaum.
- McLaughlin, B. (1987). Theories of second-language learning. Maryland: Edward Arnold.
- McLaughlin, B., Rossman, T., and McLeod, B. (1983). Second-language Learning: an information processing perspective. Language Learning, 33, 135-158.
- Nation, R. and McLaughlin B. (1986). Language Learning in Multilingual Subjects: an Information-processing Point of View. In V. Cook (Ed.), Experimental approaches to second language learning (pp. 41-53). Pergamon Press.
- Neumann, R. (1977). An attempt to define through error analysis an intermediate ESL level at UCLA. Unpublished master's thesis, UCLA.
- Ngunga, A. (1987). As Línguas Bantu de Moçambique. Limane, Linguística e Literatura, 2, 59-70.

- Perkins K., and Larsen-Freeman, D. (1975). The effect of formal language instruction on the order of morpheme acquisition. Language Learning, 25, 237-243.
- Ringbom, H. and Palmberg R. (1976). Errors made by Finns and Swedish-speaking Finns in the learning of English. Finland, Abo: AFTIL 5.
- Rutherford, W. (1982). Markedness in second language acquisition. Language Learning, 32, 127-55.
- Schachter, J. (1974). An error in error analysis. Language Learning, 24, 205-214.
- Schachter, A. T. and Diffley, F. (1976). Learner intuitions of grammaticality. Language Learning, 26, 1- 15.
- Schumann, J. (1978). The pidginization process: A model for second language acquisition. Rowley, MA: Newbury House.
- Schumann, J. (1981a). Discussion of 'Two perspectives on pidginization as second language acquisition'. In R. W. Andersen (Ed.), New dimensions in second language acquisition research (pp.196-201). Rowley, MA: Newbury House.
- Schumann, J. (1981b). Reaction to Gilbert's discussion of Andersen's paper. In R. W. Andersen (Ed.), New dimensions in second language acquisition research (pp.196-201). Rowley, MA: Newbury House.
- Schumann, J. (1982). Simplification, transfer and relexification as aspects of pidginization and early

- second language acquisition. Language Learning, 32, 337-366.
- Schumann, J. (1983). Reaction to Eckman and Washabaugh's discussion of Schumann and Stauble. In R. W. Andersen (Ed.), Pidginization and creolization as language acquisition (pp.290-297). Rowley, MA: Newbury House.
- Selinker, L. (1969). Language transfer. General Linguistics, 9, 67-92.
- Selinker, L. (1972). Interlanguage. IRAL, 10, 209-231.
- Sharwood Smith, M. (1979). Strategies, language transfer and the simulation of the second language learner's mental operations. Language Learning, 29, 345-61.
- Sibayan, B. P. (1974). Language Policy, Language Engineering and Literacy in the Philippines. In J. Fishman (Ed.), Advances in language planning (pp.221-254). The Hague, Netherlands: Mouton.
- Sjoholm, K. 1976. A comparison of the test results in grammar and vocabulary between Finnish -and Swedish-speaking applicants for English. In H. Ringbom and R. Palmberg (Eds), Errors made by Finns and Swedish-speaking Finns in the learning of English (pp.54-137). Finland, Abo: AFTIL5.
- Slobin, D. I. & Ferguson, C. A. (Eds.). (1973). Studies of child language development. Holt, New York: Rinehart and Winston.

- Slobin, D. I. (1985). The crosslinguistic study of language acquisition. Vol 2 Hillsdale, N.J.: Lawrence Erlbaum.
- Smith, M. S. 1979. Strategies, Language Transfer and the Simulation of the Second Language Learner's Mental Operations. *Language Learning*, 2, 345-361.
- Stassen, L. (1985). *Comparison and universal grammar*. New York: Basil Blackwell.
- Stauble, A. M. (1978). The process of decreolization: a model for second language development. *Language Learning*, 28, 29-54.
- Stockwell, R. P. & Bowen, J. D. (1965). The sounds of English and Spanish. Chicago: Chicago University Press.
- Stockwell, R. P., Bowen, J. D. & Martin, J. W. (1965). the grammatical structures of English and Spanish. Chicago: University of Chicago Press.
- Swain, M. (1975). Changes in errors: Random or systematic? Paper presented at the Fourth International Congress of Applied Linguistics, Stuttgart.
- Tarone, E., Frauenfelder, U., & Selinker, L. (1975). Systematicity/variability and stability/instability in interlanguage systems. Paper presented at the Sixth Annual Conference on Applied Linguistics, Ann Arbor.
- Taylor, B. (1975). The use of overgeneralization and language transfer strategies by elementary and

- intermediate students in ESL. Language Learning, 25, 73-107.
- Warden, D. A. (1976). The influence of context on children's use of identifying expressions and references. British Journal of Psychology, 67, 101-112.
- Wardhaugh, R. (1970). The Contrastive Analysis Hypothesis. TESOL Quarterly, 4, 123-30. Reprinted in Schumann and Stenson, 1975.
- Whinnom, K. (1971). Linguistic hybridisation, In D. Hymes (Ed.), Pidginization and creolization of languages(pp.91-115). Cambridge, U.K.: Cambridge University Press.
- Wode, H. (1976). Developmental sequences in naturalistic L2 acquisition. Working Papers on Bilingualism, 11, 1-23.
- Wode, H. (1981). Learning a second language: An integrated view of language acquisition. Tübingen: Narr.
- Wode, H. (1982). Language transfer: A cognitive functional and developmental view. Paper prepared for the Second European-North American Workshop on Cross-Linguistic Second Language Acquisition Research, Jagdschloss Gohrde, August 1982.
- Wode, H. (1984). Some theoretical implications of L2 acquisition research and the grammar of interlanguages. In A. Davies, C. Criper, and A. P. R. Howatt, (Eds.), Interlanguage (pp.162-184). Edinburgh: Edinburgh University Press.

Zobl, H. (1979). Systems of verb classification and cohesion of verb-complement relations as structural conditions on interference in a child's L2 development. Working Papers on Bilingualism, 18, 43-57.

Zobl, H. (1980). The Formal and Developmental Selectivity of L1 Influence on L2 Acquisition. Language Learning, 1, 43-57.

Zobl, H. (1983). Markedness and the projection problem. Language Learning, 33, 293-313.

Zobl, H. (1984) Cross-language generalizations and the contrastive dimension of the interlanguage hypothesis. In A. Davies, C. Criper, and A. P. R. Howatt (Eds.), Interlanguage (pp.79-97). Edinburgh: Edinburgh University Press.

APPENDICES

Appendix A, B, D and E are absent in this digital version.

APPENDIX C

LIST OF ERROR TYPES PRODUCED

I. Comparatives

Error Type 1 ("more" + monosyllabic adjective)

e.g. "John is more tall than Mary."

Error Type 2 (omission of the comparative marker)

e.g. "John is tall than Mary." or
"Mary is beautiful than Elsa."

Error Type 3 (omission of "as" before the adjective)

e.g. "John is tall as Mary."

Error Type 4 ("very" substituted for the comparative marker)

e.g. "John is very tall than Mary."

Error Type 5 ("in relation to" substituted for "than")

e.g. "John is tall in relation to Mary."
"John is more tall in relation to Mary."
"John is very tall in relation to Mary."

Error Type 6 (overgeneralization)

e.g. "John is more taller than Mary."
"John is famouser than Mary."

Error Type 7 ("more...than" substituted for the verb "to surpass" or word order inversion)

e.g. "John is tall pass Mary."
"John is tall more than Mary."

OTHER ERRORS

- a)"John is a tall than Mary."
- b)"John is very more tall than Mary."
- c)"John is the more tall than Mary."
- d)"John is as tall than Mary."
- e)"John is more tall as Mary."

II. Articles

Error Type 1 (omission of the article in front of
anything other than proper names and city
names)

e.g. "0 book is heavier than 0 notebook."

Error Type 2 (omission of the second article in a sentence)

e.g. "The book is heavier than 0 notebook."

Error Type 3 (omission of the first article in a sentence)

e.g. "0 book is heavier than the notebook."

Error Type 4 and 5 (improper use of definite and indefinite
article in a sentence)

e.g. "A John is taller than the Maria."
"The John is taller than a Maria."

Error Type 6 (use of definite article with proper names)

e.g. "The John is taller than the Mary."

Error Type 7 (use of definite article in front of first
proper name in a sentence and omission
of the article in front of the second name)

e.g. "the John is taller than 0 Mary."

Error Type 8 (use of definite article in front of pronoun)

e.g. "The my book is heavier than the your book."

FOOTNOTES

1. Generally speaking a strategy is a well organized approach to a problem. In this paper, cognitive strategy means a cognitive activity at the conscious or subconscious level that involves the processing of second-language data in the attempt to express meaning.

2. "Language transfer" and "Interference"

Language transfer describes the transfer from a source language, which can either be the L1 or any other acquired language, to a given target language. When the effects of transfer are deviant from target norms, it is said to be negative and may thus be termed interference.

3. UNICEF Mozambique report, September 1986. Written by Lindsey Hilsun and Sigrun Slapgard.

4. "Interlanguage"

In this paper it refers to the separate linguistic system that a language learner builds when trying to figure out how the TL system works.

5. "Partial correspondence" and "Overlap"

By overlap it is meant that there is a correspondence between two or more languages, i.e., a certain meaning is realized by the same structure in both languages. Most of the time this overlap/correspondence is only

partial, varying in degree. For example, the overlap between Portuguese and French comparative structures is greater than that between either of these two languages and English. Another example of partial correspondence is the perfect tense in French and in English. Sometimes it may mean the same in both languages, but other times it may have a different meaning.

6. Finland has two official languages, Finnish and Swedish, which are not related to each other.

7. "markedness"

Linguists working in the Chomskyan school, suggest that linguistic rules can either be part of core grammar (i.e., the universal rules) or be part of the periphery (i.e., are specific to particular languages). Core rules are considered to be unmarked and therefore easily acquired. Periphery rules are considered to be marked and therefore difficult to learn.

8. Kellerman acknowledges that many TLa-TLb errors can be explained in terms of S-R theories. "Thus", he says, Dutch, my current TL, now occasionally interferes with my most proficient TL, French - though these errors are always known to me; they are 'performance failure'."

9. English has a somewhat special status within this class, in that the particle than has gradually developed into a

preposition. For a detailed discussion of the English comparative see section 9.4 of Stassen 1985.

10. Due to time constraints this data could not be used in the present study.

VITA

Graduate School

Southern Illinois University

Maria Manuela Julien

Local Address:

Home Address:

Eduardo Mondlane University (UEM), Maputo, Mozambique
Bachelor of Arts

Southern Illinois University at Carbondale
Master of Arts in Applied Linguistics

Special Honors and Awards:

UEM Scholarship 1982-1983
British Council Scholarship 1985-1986
Fulbright Scholarship 1987-1990

Thesis Title:
Transfer as a Cognitive Process in the Acquisition of a Third Language.

Major Professor: Dr. Paul Angelis