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SOCIOCULTURAL INFLUENCES ON THE DEVELOPMENT
OF MEXICAN AMERICAN LANGUAGE STYLES

by

Rodolfo Gaitan Serrano

A Dissertation Submitted to the Faculty of the
COLLEGE OF EDUCATION

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

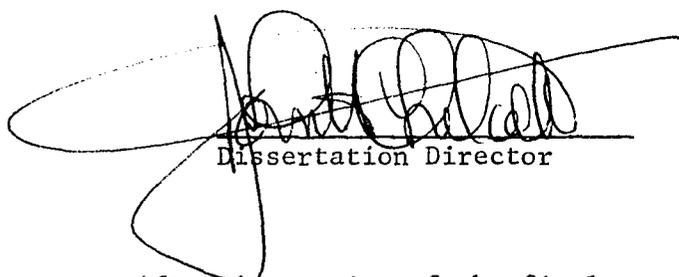
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direction by Rodolfo G. Serrano
entitled Sociocultural Influences on the Development of
Mexican American Language Styles
be accepted as fulfilling the dissertation requirement of the
degree of Doctor of Philosophy



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ABSTRACT

Problem

It was the purpose of this study to develop a model for language-style identification. It was hypothesized that by the application of well defined criteria that would insure its operational characteristics, the model would achieve wide applicability with different languages.

The literature did not reveal any considerable number of investigations on language-style identification. Those investigations that indicated any probing into language styles did not show any indications of being reproducible. The literature did not show any evidence of Mexican American subjects being used in any language-style identification investigations.

Procedures

A language-styles identification model was described following established criteria that would insure reproducibility of results. Twenty-two Mexican American subjects were selected to take part in the study, and all subjects were interviewed on several occasions. On the last interviewing session a photograph was used to elicit a conversation. The entire interview was then transcribed and eighteen language elements were used as identifying characteristics of the subjects' language style.

These language elements were subjected to a computerized factor analysis program which yielded five factor loadings. The subjects were then identified on the basis of these factors. Using the Guttman scaling technique, four groups were identified as having similar language styles.

Language oriented sociocultural influences were investigated with the use of the Fisher Exact Probability Test. Sociocultural influences were then related to the language styles of the identified groups.

Results

The results of this study can be summarized by the following statements:

1. An operational language-styles identification model was described.
2. Language elements from a photograph elicited conversation can be used as variables with this model.
3. Language-styles can be identified through the use of this model.
4. Sociocultural influences that affect language styles can be identified using statistical techniques like the Fisher Exact Probability Test.

Conclusions

On the basis of this study, the following conclusions were made:

1. Language patterns of ninth-grade Mexican American students living in the barrio are modified in the process of growing up in a Mexican American community.
2. The acquisition of Pocho and Pachuco vocabulary by ninth-grade Mexican American males is learned from the older male members of the community.
3. Ninth-grade Mexican American males are influenced to learn Pocho and Pachuco by their Mexican American peer group.
4. Mexican American girls know less Pocho and Pachuco vocabulary than boys, and girls apparently speak better Spanish than boys.
5. Knowledge of Mexican American boys' and girls' understanding of the grammatical structure of English, their expression of ideas, their degree of bilingualism, the extent of their English vocabulary and their command of Spanish, can help the educator in better understanding the language-based education problems of the Mexican American student.

CHAPTER I

INTRODUCTION

A specific culture is transmitted from one generation to the next through a system of symbols whose meanings normally are learned and shared by individual members of the culture in the course of becoming an adult. The verbal symbols used by the members of the society in describing their perceived world are incorporated into the individual's linguistic repertoire early in life. As the individual matures, he continually adds, modifies, and reconstructs his linguistic repertoire. Not only does he select symbols from his linguistic repertoire but he also learns the rules that permit him to manipulate symbols into meaningful patterns (Bolinger, 1968; Bloom, 1970). Thus, he becomes familiar with the grammar, syntactic structures, and meaning of the language (Chomsky, 1968). In time he also accepts culturally defined roles that enable him to practice the language behavior prescribed by a particular social status.

Very early in life the individual in a complex society begins to play many different social roles--those associated with institutions, such as school, church, his family, his peer group--roles that he must accept in order to become a fully participating member within these

groups. It is doubtful that he conceives of them in serial or hierarchical fashion, but it is clear (Mannheim, 1936) that the young individual is aware of the roles that he must play by the way he communicates and reveals his feelings, perceptions, and understanding of given roles.

Depending on variables such as intelligence, interest, desire, an individual learns to communicate, verbally and non-verbally, in a form that becomes both familiar and peculiar to him, and as such can be considered a reflection of his perception of the social status in which he finds himself. The linguistic alternatives available to the individual, in terms of his symboling, are limited only by the individual's perception, understanding, and familiarity with ways of manipulating the symbols into a meaningful communicative form. The possibilities for individual permutation are also limited within the cultural matrix.

It will become evident that these rules of communication have been learned if a framework for understanding the communication patterns of the individual can be constructed. For example, if more than one individual is asked to relate the proceedings of a discussion minutes after they have taken part in one, their commentaries will very likely combine linguistic symbols in a variety of forms and from different frames of reference. Thus, by these rules no two individuals reproduce the ideas of the discussion in precisely the same fashion (Barnett, 1953; Wallace, 1961).

The individual's purposeful arrangement of linguistic symbols and the arrangement of his ideas are what this study will consider to be a language pattern, hereafter called a language style. This study maintains that the styling of speech by individuals concerned with the communication of experiences or ideas, using culturally prescribed symbols, is peculiar to each individual. This is not to imply that the verbal patterns are forever fixed for a speaker, but rather that there appear to be characteristic linguistic features by which an individual's verbal communication can be identified within a given social situation. Language style according to this study is the purposeful, goal-oriented verbal communication by an individual in a given social position.

Since literary styles have been identified by context analysis (De Vito, 1967), it seems plausible that linguistic or speech patterns can also be determined, given a specific language-style model, based on a speaker's phonology, grammar, syntax, and lexicon. To date, linguistic research has not revealed much by way of verbal communication pattern analysis or identification models, although identification of language styles has been suggested as plausible by some authors (Seboek, 1960; De Vito, 1967; Dolezel, 1969).

The problem of language-style identification is of great importance to linguists and educators who are interested in the structure and form of communication. This problem is especially relevant when the educator is confronted with the instruction of bilinguals. Students who speak two

languages with different degrees of facility and competency will usually exhibit different language styles in the respective languages. In these instances the problem of style identification increases in complexity because the communicative patterns of the two languages have to be weighed in terms of their effect on each other. To what extent does an individual's first language pattern influence a second or vice versa? Does his native language influence patterning or style in the second language? This study will seek to answer this and other questions closely related to language styles and their dynamics within the social context of bilingualism. This study will also attempt to develop a language-style identification model that can be used with members of any culture in order to determine their language styles.

Statement of the Problem

There is an emerging concern in the Southwestern part of the United States about the problems of communication encountered by bilingual Mexican American children. On occasion, these problems have been attributed, in a large measure, to the interference between English and Spanish languages, intelligence and motivation, and the cultural and linguistic characteristics of the Spanish speaking in the Southwest.

The problems of bilingualism have been studied extensively in terms of language switching, semantic shifting (Erwin, 1961a), and

learning and recall (Erwin, 1961). Mexican American subjects have, for the most part, been excluded from these investigations. The extent to which generalizations from such studies can be made to encompass the language problems of the Mexican American, or any other ethnic group, has been open to question (Stockwell, Bowen, and Martin, 1965). Sapir, Whorf, Carrol, Weinreich, and Hymes, who have been of the more prolific writers in the area of socio-linguistics, have argued that the uniqueness of language for a group of people can be attributed to a given population's culture and language. Although these writers have accepted certain linguistic features as being common to all languages, they have also noted many differences in the syntax and semantics of the various languages (Hymes, 1964; Gumperz and Hernandez, 1969).

The influence of Mexican American culture on the development of the language of its members has rarely been studied. In one of the more popular reports quoted, Barker (1950), who studied twenty families from the Tucson area, concluded: "Conformity in linguistic and other social behavior is obtained not only through family pressure but also through neighborhood structure." Further analysis of his study raised several questions, among which are the following: (1) To what extent does the nuclear family influence the formation of language style of its members? (2) Does the peer group of the young adult Mexican American bilingual exert a stronger influence on the development of his language style than

his family? Since these questions have not yet been resolved, an investigation of them would yield valuable results with implications for the sociolinguist as well as for the educator. This study will attempt to answer these questions.

The influence of Mexican culture--and the language developed therefrom--upon the Mexican American bilingual in the Southwestern United States is another aspect of language that is suggested for further study by Barker (1950). In particular, the influence of religion and the Mexican's high regard for his manliness and virility, henceforth referred to as "machismo," are also influences suggested for further study. Madsen (1964), in his study of the Mexican-Americans of South Texas, describes the relative importance of these cultural and social influences and their outlook that seems to pervade the whole of Mexican American life. Other authors have noted similar characteristics of the Mexican American in the Southwest, yet none has attempted to identify the influences that these sociocultural attributes might have on the language most commonly used by the Mexican American in the southwestern United States.

This study will attempt to find some relationship between cultural influences and language usage. In particular the main purposes of the study are:

1. To test the hypothesis that the phenomenon of language style exists.
2. To develop a working model with which to identify language styles.
3. To apply this model to a group of bilingual Mexican American secondary school students in order to identify their language styles.
4. To isolate some of the sociocultural factors and test their relationship to the identified language styles for the group.

Hypotheses

The underlying assumption of this proposed language-style hypothesis is that style is derived from the speaker's immediate social position in relation to others (hereafter called status); and from the speaker's choice of words (lexicon), word ordering (syntax), and communicative mannerisms that are available in his individual repertoire (hereafter called idiolect).

The idiolect of the speaker is the vehicle by which the various elements of his language can be identified; it will be used in this model in attempting to identify language styles. Hence, the speaker's choice of words (lexicon), the way he orders the use of these words (syntax), the rules that he employs (grammar), the content of his expression

(idiolect) will be used as the key in the identification of language styles. The speaker's idiosyncratic way of expression therefore will be called his idiolect, while the accepted way in which members of his social group express the same ideas will be called the dialect. Those elements of speech which are permitted by the culture in a given social context will be called pervasive for the universe of discourse (Mannheim, 1936).

Having defined the problem, introduced the basic assumptions that will compose the language-styles model, and suggested that sociocultural influences act as pervasive as well as constraining factors in language-style development, the following hypotheses will be tested:

- Hypothesis 1: To test the hypothesis that the social phenomenon of language style does exist.
- Hypothesis 2: A working model for the identification of language styles can be constructed.
- Hypothesis 3: Language styles can be identified on the basis of this model.
- Hypothesis 4: Sociocultural influences that affect language styles can be identified through the use of this model.
- Hypothesis 5: There are identifiable, socially developed linguistic elements that make one language style dominant over another language style.

Definition of Terms Used

The following definitions will apply throughout the study:

Argot. The language that is developed and used deliberately by a group of individuals such as members of a peer group.

Barrio. A neighborhood in a Mexican American community.

Channel. A medium which carries messages from speaker to listener.

Code. An arbitrary, prearranged set of symbols used in communication.

Colonia Mexicana. A Mexican American district in a city, usually composed of two or more barrios.

Coordinate bilingual. A speaker who approaches native proficiency in a language other than his native one.

Cultural pervasive. Those elements of speech permitted in a given social context by a given society.

Dialect. The ways and means of expression used by members of a geographical group within a society.

Dominant language. The language in which an individual communicates most comfortably and uses most often.

Ethnography. A written account of the social behavior and participation in community life of members of a specific culture.

Idiolect. The speech or language characteristic of an individual.

Language style. The purposeful, goal-oriented verbal expression by an individual in a given social context.

Lexicon. A compilation of all known words found in a language and their assigned meanings.

Morphemes. The smallest meaningful units, or sequence, or phonemes, in the structure of a language.

Pachuco. An argot or words found in the Spanish language of the Southwest and derived from either Spanish or English slang.

Phoneme. A class of sounds which are phonetically similar and show certain characteristic patterns of distribution in a language.

Phonology. The classification of speech sounds into phonemes and the variants of the same phoneme (the aspirated p of pin and the non-aspirated p of spin).

Pochismos. American English words that have been hispanized into the Spanish of the Southwest.

Restricted bilingual. A speaker who has non-native proficiency in his native language as well as in a second language.

Socioculture. A milieu of action of people that prompts a regularity of behavior which, in turn, establishes values, standards, and artifacts for the group of people.

Sociolinguistics. The study of verbal behavior in terms of relations between the social setting, participants, topics of communication, function of the interaction, and values held by the participants.

Subordinate bilingual. A speaker who has non-native proficiency in a second language.

Syntax. The ways in which word utterances are arranged in relation to each other.

Universe of discourse. Any verbal element or elements (entities) in a patterned form that serve a meaningful purpose in an act of communication between speaker and listener in a given social interaction.

Assumptions Underlying the Study

The following assumptions are maintained:

1. That the way the individual orders the linguistic elements in his communication will be value oriented and that these verbal elements can be used as language-style markers.
2. That language styles are discernible as a consequence of observing idiolect factors--status, role, lexicon, syntax, grammar.
3. That a model which will allow easy identification of language styles can be constructed.
4. That the intellectual skills of the subjects will represent a cross-section of a ninth-grade Mexican American population.
5. That the subjects selected for the study represent the prevalent language styles in a particular Mexican American community.
6. The number of selected subjects will be representative samples of prevalent language styles in the community.
7. That the subjects classified as dominant in one language will be dominant in the language in which they are classified.
8. That the conversations with the subjects result in an adequate sample of idiosyncratic verbal behavior in the context in which the conversation was elicited.
9. That from the transcriptions of these conversations representative selections for analysis can be made.

Limitations of the Study

The following limitations of the study are anticipated:

1. The use of the proposed model for language-style identification will , during the initial pilot study be a limiting factor until it can be modified.
2. The factor analysis of the data requires a large number of variables in order to insure a meaningful reduction of variables to be used in the identification of language styles. The small number of variables in the study may reduce the statistical significance.
3. The diffuse nature of cultural influences on language style will make it difficult to mutually exclude and isolate all those influences that impinge on the language styles of the subjects.

Procedure of the Study

Review of the literature

The initial phase of this study necessitated a review of the literature in order to insure any duplication of effort as well as to help formalize and structure the design of the study.

Early in the study it was determined that in order to strengthen the development of the design, a set of criteria for reviewing the substance of the literature would have to be applied. These criteria are identified

and appear in Chapter II. Wherever possible one or all criteria were applied to the selected references utilized in the areas pertaining to verbal language behavior, language-style models, and sociocultural influence on language. While there is considerable literature devoted to the study of language behavior, the use of these criteria reduced the literature to only those features which concerned themselves with language style.

Development of the Model

In the early stages of hypothesizing the existence of socially developed verbal language styles, it became apparent from the review of the literature that there were few language-styles identification models. Those that were available, it was found, did not follow any well stated propositions on which they were hypothesized. Neither did they show any semblance of the research being able to be reproduced by other investigators.

The development of the language-styles identification model proceeded with the two basic tenets:

1. A model for language-style identification can be developed.
2. The model for language-style identification had to insure reproducibility.

Studies on an individual's language as well as studies on culture and personality were relied upon as the foundation on which this model

slowly developed. The concepts of status and role expectations quickly assumed a major position in the hypothesizing of the model.

The synthesis of the basic tenets along with the studies on culture and personality culminated in the development of a language styles identification model. The model proposed in this study assumes that the culture establishes its statuses for which there are certain specified roles. The individual learns these roles in the context of specified social situations which in turn set up certain constraints on the language usage of the individual.

The model that is proposed in this study utilizes all components of a person's speech in a given social context for a social position. With the use of tape-recorded interviews and conversations with individuals the data elicited from the subjects can be subjected to study in terms of parts of speech, classification of ideas communicated, degree of bilingualism, and a host of speech related characteristics. With the use of a computer and the Factor Analysis Biomedical Computer Program (BMD, 1964) the process of language-styles identification is greatly enhanced. A complete and more detailed explanation of the model and the place of the computer in the analysis of the data will be found in Chapter III.

Selection of the Subjects

All of the subjects selected for this study were ninth-grade students in a secondary school English class in southern Arizona. The choice of

ninth grade subjects was due to the uniqueness of this grade level. It is during this transition period from eighth grade to ninth that a large number of Mexican American students drop out of school (as per a civil rights report, 1968). The school was selected because of its proximity to the university, its urban location, its large size, a student composition of mixed ethnic backgrounds, and its closeness to the Mexican Border. In other words, the conditions required for an analysis of the language styles of Mexican American bilingual students were considered by the investigator to be optimum in this locality because of the number of Mexican American students and their wide range of language usage. A more detailed account of the urban nature of the school, its size and student composition, will be examined in Chapter III.

The subjects who took part in this investigation were selected as closely as possible in accordance with the following plan:

- 4 Mexican American Coordinate bilingual boys
- 4 Mexican American Subordinate bilingual boys
- 4 Mexican American Coordinate bilingual girls
- 4 Mexican American Subordinate bilingual girls
- 4 Mexican American Monolingual boys and girls

The purpose of this selection was two-fold: it allowed the observation of an equal number of boy and girl bilingual student language styles, and it ensured the use of a statistical technique that would greatly enhance

the identification of language style preferences by the members of this bilingual group.

A large number is not a particularly significant sample size for linguistic research. As the literature surveyed indicated, there was no unanimity or consensus on the part of linguistic researchers regarding the adequate number of subjects to be used in this kind of research. Fisher (1958) used twenty-four in one research situation, while Fishman (1968a) used thirty subjects, and less on several other occasions.

Collection of the Data

The data were collected over the span of nine months concurrent with the high school academic year--September to June. The data consisted of information about the metropolitan area, including the neighborhood in which the school was located, and information obtained from conversations with students and parents in the community. The data collected also included voice tape recordings of the student participants during three different interviewing sessions throughout the year as student written responses to a questionnaire.

The kind of information sought from the parents was primarily concerning their language usage: Do both parents speak English? How long have they lived in this area? Is Spanish spoken at home? How often? Do they listen to Mexican American radio stations?

Analysis of the Data

The statistical procedure of factor analysis was used to reduce the number of variables from the taped interviews to a smaller number of variables to be considered by the model. Factor analysis has been described as a statistical technique (Fruchter, 1954) and as a statistical science (Harmon, 1967). The primary object of factor analysis is to reduce the number of variables in a correlated matrix into a smaller number of factors. The factor or factors which hold the measurements together may be common or specific to several sets of common factors. Traditionally, factor analysis has been used as a method for selecting test items. This has been accomplished by finding positive correlations in the test items and discarding those that do not show any relationship (Nunnally, 1967). By factor analysis, correlation of items or variables can be found after the test has been constructed, and it is the most formidable method, according to Nunnally. This is basically the approach utilized in the present study.

After the factors were identified, the participants were then ascribed their "factor characteristics." In tabular form (Appendix II) the predominant clustering or grouping around a certain factor was not observable. Therefore, regrouping of the participants, using Guttman statistical techniques, was a more efficient technique that led to identification of the groups (Stouffer, 1950; Goodenough, 1963b). The group identified by these means were mutually exclusive and the resulting categories

indicated that a language style could be isolated. A complete discussion and analysis of the data and results will be found in Chapter III of this study.

The identification of a language style and the grouping of some of the members around a given style permitted a more systematic approach to the study of the sociocultural influences on language style. The Fisher Exact Probability Test was used to determine the influence of Spanish on English and English on Pachuco. The null hypothesis to test Pachuco influence on Spanish was also attempted with the Fisher Exact Probability Test (Siegal, 1956), as were other language combinations. The Fisher Exact Probability Test was used to test the correlation of peer group membership to sociocultural elements such as sex and language because the number of participants in the study did not permit the use of the Chi-Square Test or other related tests (Siegal, 1956).

From interviews with the parents, students, and teachers a series of sociocultural elements were isolated and correlations were made between these elements and the results of the analysis of the tape-recorded data. These correlations provided a synthesis of the data. The complete analysis of these data and its correlations will be found in Chapter III.

Summary

This chapter began with an explanation of the study of language patterns and the problems of studying language styles in a bilingual

community. The problem of the study was defined and hypotheses were stated. The terms used in the study were identified, as were the assumptions and limitations of the study. The procedures to be followed in the study were described, and the procedures for analysis of the data were outlined.

CHAPTER II

REVIEW OF THE LITERATURE

Language Style Models

The number of studies on the subject of language-style identification are few, and of those available the assistance they lend to the study of the language styles of bilinguals is questionable. In particular the language-styles identification models proposed by such socio-linguists as Joos (1959), Bright (1964), Hodge (1957), Black (in Seboek, 1960), offer little if any assistance in the understanding of the elements of speech that the speaker puts together in his own idiosyncratic way (Weinreich, 1953; Erwin-Tripp, 1964). In every case above the investigators failed in meeting two or more of the following criteria established by this investigator:

1. The model they propose is not stated specifically enough to allow verification of the results.
2. The elements they propose to use in the study of language-style identification is limited to the subjects syntax-grammar, or his lexicon, or his semantics or combinations of these categories.
3. The subjects they use in their studies are not bilinguals, i. e., subjects that have some fluency in two languages.

According to Miller (Markel, 1969, p. 213), the possibility for the study of verbal language style does exist. He stated that such indicators as

vocabulary size, verbal diversification and type-token ratio (the ratio of the number of different word-types to the total number of word-tokens in the passage), sentence length, punctuation, verb-adjective ratio (the quotient obtained when the number of active constructions in a story is divided by the number of qualitative constructions) "can all be used as verbal style indicators." Miller proceeded to make an analysis of each of these indicators as separate categories, but did not synthesize these categories into a meaningful style description or identification. In short, he identified the elements to be used as style indicators and only vaguely implied any grouping of the tendencies preferred by individuals into identifiable categories. His approach was very similar to the approach suggested in Dolezel and Bailey (1969). Dolezel and Bailey have presented a more thorough and complete analysis of style and its statistical treatment as it pertains to written prose. To what extent Miller's use of written prose style identification markers can be used to identify verbal language styles is open to question and has not been pursued any further.

Gumperz (1964b) wrote about "styles" and "dialects" more or less assuming that the terms were mutually exclusive. He made little distinction between the terms except to note that bilinguals use a different "style of speech associated with a social situation." His review of dialect studies left his working definition of dialectology as a study of regional language and stylistics obscure as to the distinction between the two terms.

William Bright (1964) formulated the two language style categories "formal" and "colloquial" in describing an Indian community's language styles. His intent was one of describing and isolating of the linguistic features of a subject's verbal communication, such as methods of addressing a person in authority. He established the two language style categories Formal and Colloquial, studied the language patterns of a community, and classified the patterns accordingly.

By limiting the analysis of his data to his formulated categories, he did not clarify the meaning of individual language styles because (1) his categories were too broad and (2) it was questionable that a group of people or an individual could be limited to two language styles.

The confusion that arises in attempting to describe language styles in the research which has been reported to date might have been due to the researcher not providing a well-described model for the classification and identification of language styles. For example, Joos (1959), in attempting to isolate language styles, used two basic criteria: the effect or "levels of usage" of language and "cause" or "free variation" of lexical choices. Although this criteria might be considered acceptable, in some respects, he presented no conclusive evidence in favor of the style categories which he identified as "intimate," "casual," "consultative," "formal," and "frozen." His categories rely solely on short conversations

in context without due regard to key elements of linguistics, such as phonology syntax, or lexical distribution.

In using the term "speech styles" synonymously with language styles, De Vito (1967, p. 248) wrote, "Style and the characterization of the field are essentially behavioristic rather than phenomenological or cognitive, in their emphasis on observable behavior response." While he identified speech style behavioristically, he appeared to disregard the cognitive aspects of the individuals language--the culture-bound symbols--in favor of a more detailed linguistic approach that treats phonemes, morphemes, grammar, and lexical choices. The status and role of the individual in a given social context do not appear to be of major importance in his discussion. Neither does he treat the language styles of members of a bilingual community.

From a philosophical frame of reference, Nist (1968) formulated a model for literary style identification that included linguistic elements. His model was exacting and lead the reader through a step-by-step procedure that could easily have led to duplication of the research by other investigators. The only elements that appear missing are the social ingredients of a conversation such as the social context of the conversation, the status and role of the speaker, and the fact that his model was a theoretical model meant to study literary styles cannot be applied to the study of verbal language-styles.

Plainly, the literature on the subject of verbal language-styles identification is almost negligible. The numbers of research articles on literary styles on the other hand are substantial. Suffice it to say that in the interest of this study on the identification of verbal language styles, to continue to review the literature related to literary styles would not prove very fruitful. Hence, it would be of little or no avail to proceed with this task.

The foregoing review is representative of written material currently available in area, and it suggests the formulation of paradigmatic statements on the identification of language styles. The plausibility of using phonological, syntactical, semantical, lexical, and sociocultural influence for language-styles identification increases when all of these factors are put in the context of an operationally reproducible model. That is, the literature strongly suggests the possibility of the development of a language-style identification model that would permit the identification of verbal language styles in a given social context. But as yet, no such model has been developed.

Functional Models

In discussing the formulation of models and their application, Black (1962) established a certain set of criteria for what he considered to be the essential elements necessary for the formulation of a functional model. In abbreviated form his description of a functional model and

the elements it includes are as follows:

1. That an original field of investigation exists in which some facts and regularities have been established.
2. That a need is felt for further clarification of a problem.
3. That objects, materials, mechanisms, etc., can be described as well as their postulated properties.
4. That explicit and implicit rules for correlation of statements can be made.
5. That inferences can be made from the model.

It is important to note that Black's criteria for the formation of functional models are unique in that they attempt to specify what constitutes an operable, functional model that will yield reproducible results. Relying on Black's assumptions of what constitutes a functional or workable model, the criteria remain to be tested. In particular these criteria have been used in testing the adequacy of the "model" described thus far.

In applying any criteria to a functional model of language styles, the model must also insure its reproducibility. Buchler (1961, p. 135), in describing operational method, stated: "A method is a power of manipulating natural complexes purposively and recognizably, within a reproducible order of utterance; and methodic activity is the translation of such a power into the pursuit of an end. The end is implied by the reproduction." This is another aspect of the criteria that were applied in the evaluation of the literature on language-styles models in the first part of this chapter.

The specific criterion wherein reproducibility is presented appeared on page 21 of this text.

In the fields of anthropological linguistics, English and Education, the models related to language styles which were surveyed demonstrated weaknesses either in delineating the parameters of the categories implicit in the models, or in the applicability and reproducibility of the models. In short, the models proposed offer no assurance that other investigators will get the same results if they investigated the same community on which the original model was based.

Accordingly, the thesis of this investigation is the development of a language-styles identification model that incorporates these two features just described:

1. That it meet Black's criteria of a functional model.
2. That it insures reproducibility.

These two aspects of the study are crucial if the model is to perform its function in facilitating the identification of the language styles of any given bilingual group.

The Sociocultural Influences on Language

Weinreich (1953) wrote that the sociocultural setting is extremely important in attempting to understand the "precise effect of bilingualism on a person's speech." He noted that the causes of specific interference phenomena can, in most cases, be determined by linguistic methods:

If the phonic or grammatical systems of two languages are compared and their differences delineated, one ordinarily has a list of the potential forms of interference in the given contact situation. Lexical borrowing, too, can often be explained by investigating the points on which a given vocabulary is inadequate in the cultural environment in which the contact occurs. But not all potential forms of interference actually materialize. The precise effect of bilingualism on a person's speech varies with a great many other factors, some of which might be called extra linguistic because they lie beyond the structural differences of the languages or even their lexical inadequacies (p. 3).

Some of the non-structural factors which Weinreich mentions are inherent in the bilingual's relation which he brings into contact with the structural aspects of the languages, for example:

1. The speaker's facility of verbal expression in general and his ability to keep two languages apart;
2. Relative proficiency in each language;
3. Manner of learning each language;
4. Attitude towards each language;
5. Size of the bilingual group and its sociocultural homogeneity or differentiation; demographic facts;
6. Preference of bilingual individuals with given characteristics of speech behavior in the several subgroups;
7. Attitudes toward the culture of each language community;
8. Tolerance or intolerance with regard to mixing languages and to incorrect speech in each language (pp. 3-4).

The importance of his observation is not to be misconstrued as something superficial in the area of linguistics, for other researchers confirm all aspects of his concerns.

Focusing on the Southwestern United States where the largest ethnic minority are the Mexican Americans, Barker (1947a), in his investigation of how the linguistic behavior of Mexican Americans in a Tucson community are related to other aspects of their social behavior, states:

1. As the visible symbol of the Tucson Mexican Community, the neighborhood upholds conformity to a Mexican cultural tradition and to the speaking of the Southern Arizona dialect, which is in turn symbolic of the neighborhood group.
2. The linguistic and other social behaviors of residents in the Mexican neighborhood are class-typed as well as cultured-typed.
3. Conformity in linguistic and other social behavior is obtained not only through family pressure but also through neighborhood structure.
 - a. The pressure of immediate neighbors
 - b. The pressure of neighborhood institutions
4. The influence of the neighborhoods on language usage varies according to the degree to which the neighborhood separates family units from outside majority group influences.

Other authors, such as Whorf (1967), Carroll (1953), Bernstein (1966), and Hymes (1964), have written extensively on various aspects of the sociocultural influences on language and its usage, and all of them, to varying degrees, are in agreement with the thesis that language patterns are socially and culturally influenced. The degree to which the social and cultural influences impinge on the language is dependent upon such factors as age, economic status, education (Bernstein, 1966), and degree of bilingualism (Hymes, 1964).

Other investigators, such as Fisher (1958), in studying social influences on the choice of a linguistic variant, observed that a relationship exists between the use of certain word endings (ing vs. in) and the community in which they are used. For example, Fisher found that a definite relationship existed between word ending preference and family status. The family's influence on the choice of word ending, while not specifically stated by Fisher was nevertheless implied in his report. It would seem, at least from this report, that family influence is more important and directly tied to certain word usage than is purely economic status. The Fisher report therefore gives added support to the theory of the cultural influence on language.

Labov (1963, p. 308), writing along similar lines as Fisher on the topic "Social Motivation of Sound Change," concluded: ". . . we can say that the findings give good confirmation. . . that there is a correlation of social patterns with the distribution of one linguistic variable" (the /ai/ and the /au/ sound). Labov's results continue to add further credence to the theory that language can be modified by social and cultural influences. Labov's research like Fisher's and Bernstein's suggest even further that certain aspects of a language are modified to some extent by the family, the community, and the cultural influence that pervades the whole of the individual's life and influences the development of the individual's linguistic repertoire.

In reviewing the literature related to the topic of language-style identification and sociocultural influences on language styles, this investigator has yet to find any literature that specifically treats the subject of language style or stylization as it pertains to the Mexican American in the Southwestern United States. Besides the Barker (1947a) study, this investigator has not been able to locate any research that involves use of Mexican American subjects with the specific intent of researching the sociocultural influences on the development of Mexican American language-styles.

Summary

This chapter was primarily concerned with a general review of the literature related to the formulation of language style models and sociocultural influences on language. Since the subject of stylization can be approached from many points of view, this survey of the literature included only those studies that were found to be in the general direction of this investigation: the development of a functional language-styles model that would utilize the grammatical, syntactical, lexical, and sociocultural influence in the identification of Mexican American language styles.

CHAPTER III

METHODS AND PROCEDURES

The Language-Styles Identification Model

Black in evaluating the states of models described in the research literature (Black, 1962) has suggested that criteria for the evaluation of the adequacy of models are necessary. He has identified five characteristics that he considers the most important features of models to be considered for the model to function in an operational sense; these five criteria are as follows:

1. That facts, principles, laws exist for the area in which the model is to be formulated.
2. That there is a need for further clarification of a problem.
3. That postulates can be formulated from utilizing the facts, principles, laws in the area under investigation.
4. That both explicit and implicit rules can be formulated that will insure the correlation of the statements.
5. That inferences can be made from the new data acquired after the processing of known data.

Essentially in the development of the language-styles identification model (Black's criteria) was adhered to. The criteria appear to follow in a logical fashion and were in keeping with the nature of this study to maintain the simplicity of identification of language styles and to have the assurance of reproducibility.

The proposed language-styles identification model was based on the assumption that language styles are formed as a consequence of social interaction between two or more individuals. Assuming that the individuals have grown up in a specific culture and learned the intricacies of living in that culture, this model suggests that certain language styles will be developed and maintained by the individual. At a general level this study also assumes that there exist cultural patterns of language usage that are utilized by individuals in the course of their own stylization or language-style development.

A clarification between language style and language pattern is important at this juncture. Language pattern is a purposeful arrangement of linguistic symbols on an individual basis (italics mine). While this definition is adequate in most respects for the purposes, of this study, the term implies a process, or an action-form, not found in the definition. The term language style as used in this study will henceforth mean a purposeful arrangement of linguistic symbols corresponding to the message the individual wishes to communicate (italics mine).

This difference between style and pattern, as viewed in this study, is one of role orientation on the part of the speaker and general acceptability by the members of the culture. Style is an individual, purposeful, role-oriented activity that could make use of generally accepted language patterns. Language patterns are long established, generally well accepted,

and duplicated, ways of stringing out symbols. The difference between the two terms, according to this usage, is one of variation (style) versus fixation (pattern) of speech symbols.

The proposed language-styles identification model is shown, diagrammatically, in Figure 1. Since all individuals (an individual member can be called ego) of a given culture are continuously subjected to the pressures of having to conform to the language of the group, these pressures in this study are considered shared, patterned, and learned by the ego in the process of becoming a member of the group. Within the structure of the family and the community, the individual builds a repertoire of linguistic alternatives for different situations. The culture dictates the use of linguistic symbols in ordered form for a given set of social conditions (Statuses). The Universe of discourse, then, in this model is taken as the availability of any element or elements (entities) in a patterned form that serve a meaningful purpose in an act of verbal communication between speaker and listener in a given social interaction.

In this model, it is assumed that the status of the individual dictates the role he is to play in a given social interaction. The role enactment by the individual, under these conditions of status controlling the role, will demonstrate the restraints placed on the role by the culture. What this model suggests, is that the linguistic repertoire of an individual under a given role condition will be linguistically bound by described

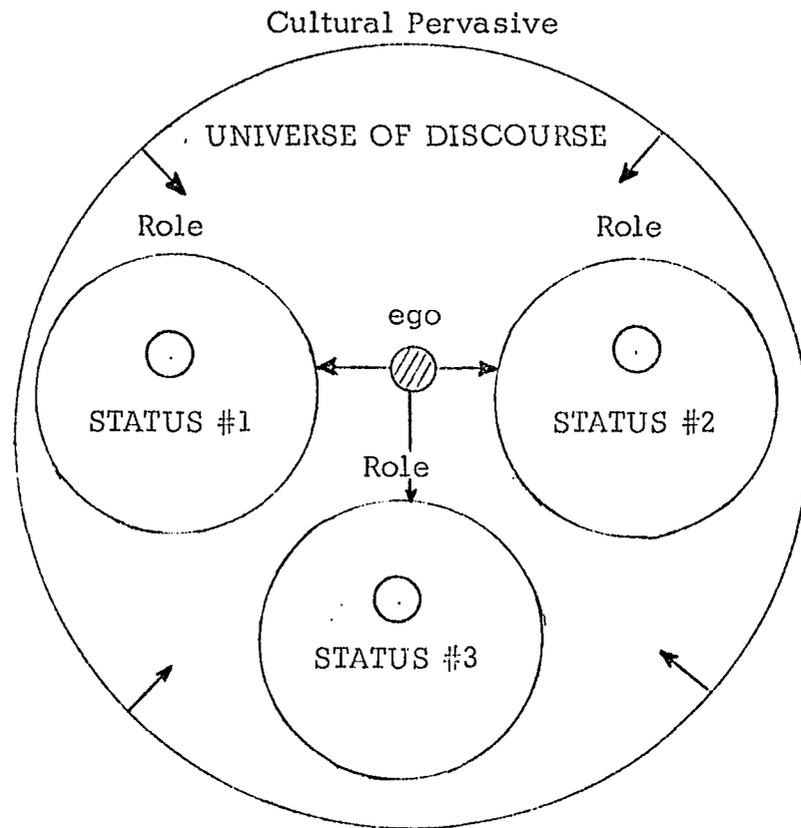
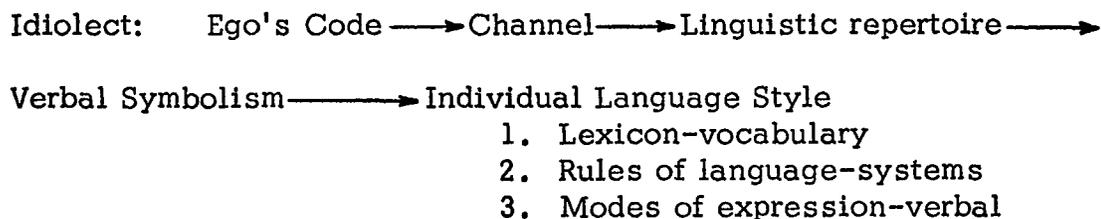


Figure 1. The Relationship between Individual, Status, and Role

parameters. The alternatives that are made available to the individual are dictated by the individual's understanding (his perceptions and conceptions) of the role. His intelligence, biases, interest, and awareness of the situation are only a few of the factors that will have an effect on the individual's response. This also suggests that the individual has non-linguistic alternatives (i.e., Weinreich's non-structured factors) which could in fact influence his selection of linguistic symbols.

Figure 2 demonstrates the relative portion of ego's idiosyncratic language referred to as the idiolect.

For purposes of achieving simplicity and parsimony of design, this language-styles identification model identifies the idiolect as shown in the following Components of Style:



Idiolect is the idiosyncratic language of the individual or ego. In the enactment of a role dictated by a status, ego selects from an arbitrary set of prearranged symbols (called code); symbols which will express what he wishes to communicate under his given set of circumstances.

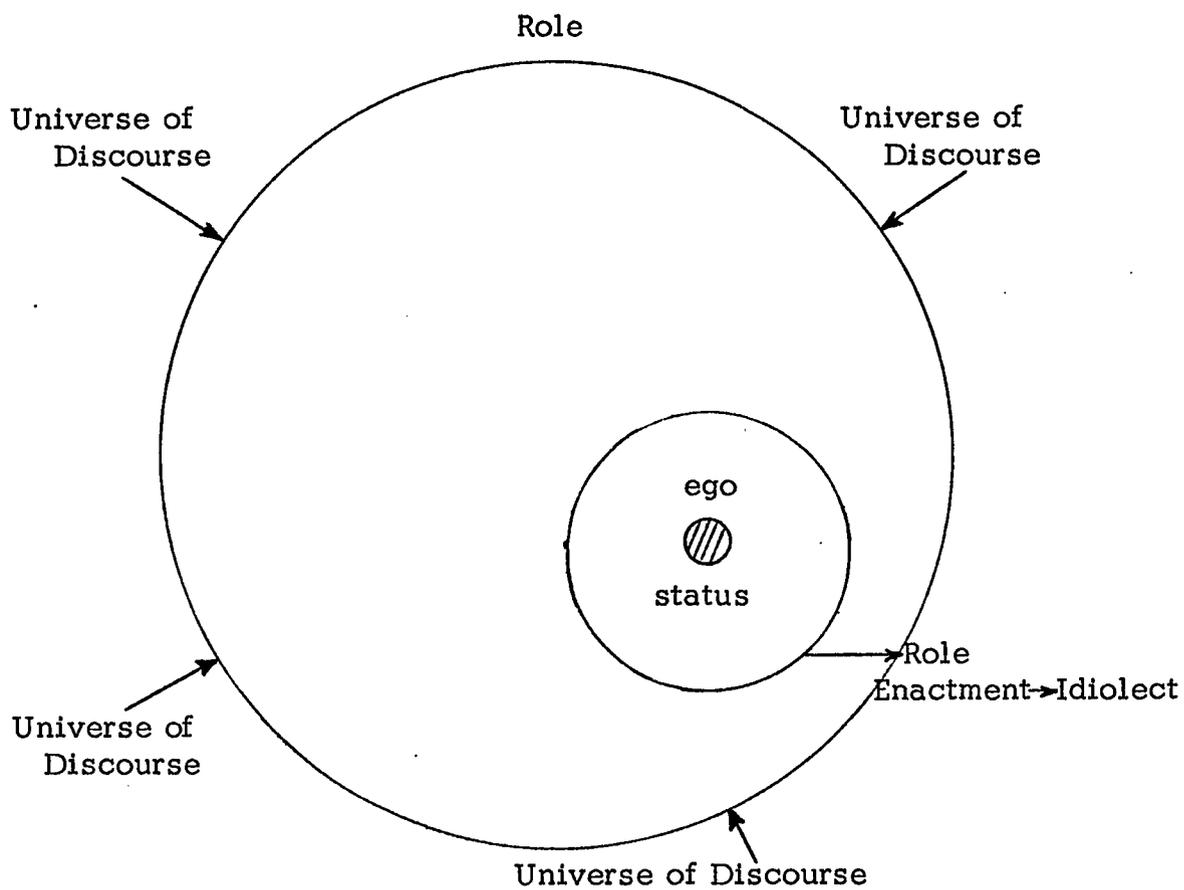


Figure 2. The Idiolect as a Vehicle
for Role Enactment

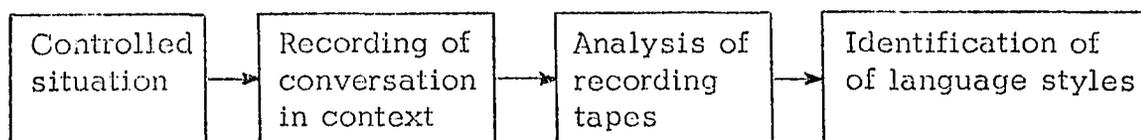
Ego then selects the median which will carry the message from him to his listener (called channel). As Ego delves into his linguistic repertoire which includes his vocabulary, his knowledge of the rules of the language, and his characteristic modes of expression, he proceeds to draw more specific symbols from his code. The corresponding verbal symbolism that emerges from ego, in whatever form ego wishes it to take in the process of his communication, henceforth becomes ego's language style.

Ego's language style, in short, depends on the role that he is obligated to enact. If the role calls for ego to play the part of interviewee, he will call upon the code that he recognizes from past experience as being closely related to the language behaviors expected of the situation. This he has learned from his culture. Having selected the code for the role, if the encounter is an interviewing session, one of the channels that ego will select for expression will be the verbal channel. From his linguistic repertoire ego will then select his symbols and communicate them in a form he deems most important and that is in keeping with what he wishes to communicate (Figure 3).

The operational aspects of the language-style identification model that depicts the individual's speech in the context of a social status is shown below. A more complete and detailed account of the operational model is shown in Appendix A.



Figure 3 . A Mexican Family



The controlled situation refers to the setting where the interviews were held and followed a given format. It provided a status for role enactment and corresponding language behavior, in this case the status of interviewee. (See Appendix A -- Part I)

Recording of conversations in context refers to the taped interim of the conversation elicited in response to photograph (Figure 3) depicting a familiar cultural situation which was used as the basis for the conversation. (See Appendix A -- Part II)

Analysis of recording tapes refers to the transcription and the identification of the categories of the language to be studied. (See Appendix A -- Part III)

Identification of language styles refers to the statistical treatment of the categories and the isolation of language characteristics which would permit the identification of language styles. (See Appendix A -- Part IV)

This procedure was followed in order to satisfy the criteria proposed by Black to insure the validity of the working model. The assumptions, the

required definitions, and the suggested alternatives appear to make this proposed model operational in terms of Black's criteria.

Selection of the Sample

The Community

The community in which this study was conducted was located some 60 miles north of the Mexican border in the state of Arizona. The community can be classified as an urban community since it has a population of 210,000 within the city limits. The community has only light industry such as aircraft companies, electrical manufacturing, and light construction, but claims extensive copper and silver mining operations in the immediate environs. The community also has a large military base and a university that adds to the employment opportunities of the culturally diverse population.

The social structure within the community is highly stratified, with its affluent members, its average-middle class, and its relatively poor segment of the population. The Mexican American members of the population make up about 17 percent and are by far the largest ethnic minority in the city. The Black members of the community constitute about 6 percent of the population. According to an official, 1968 Department of Labor Census report for this designated community, Mexican Americans have a median income of \$4,466 with which to support a family with a mean of 3.8 members.

The Mexican American home has a median of 3.7 rooms, one bathroom, and the house is "in need of repair."

The affluent Mexican Americans are to be found in almost all lines of employment. There are representatives in almost all levels of city government, law, medicine, engineering, teaching, private ownership of business establishments, etc. Representation in these areas however is disproportionate to the total number of Mexican Americans in the community (Hughes, 1969).

The Mexican American population was found in the various barrios of the colonia Mexicana (a Mexican American district). The colonia Mexicana was located to the west and south of the city and has artificial boundaries that act as lines of demarcation between the colonia and the rest of the city; these include a river that is dry most of the year, and a man-made automobile arterial. The barrios within the colonia can all be identified by a given name, some of which do not quite fit the description of the place they are supposed to represent. (A hypothetical example would be the barrio New York!)

In the colonia there are approximately eight barrios. The geography wherein the barrios are located varies from flat desert-like terrain to hilly and rocky land. There are some barrios where trees that can be used for shade and aesthetic purposes are sadly missing. Some barrios do not have city sewer facilities and as a result the families that live there have to use "outhouse" facilities. Street lighting is also lacking in at least

three of the barrios as are paved streets and storm drain facilities. As a consequence of the lack of these conveniences, these barrios have a great number of homes in need of repair and are continuously plagued with the problem of dust.

Within the colonia and in the barrios are located grocery stores, bakery shops, tortilla factories, liquor stores, bars, and barber shops where most of the business is transacted sometimes in Spanish, sometimes in English, and often times in a mixture of both Spanish and English. This investigator having spent many hours in barrios has concluded that the younger the individual the less Spanish he uses when he frequents one of the business establishments. The older the Mexican American gets, the more he tends to use the Spanish language. This is particularly true of first, second, and third generation Mexican Americans in this community.

The colonia prides itself on having two Spanish-language radio stations, which operate during the daylight hours. This has been exemplified by the increase in personnel at the radio stations and the personnel's continued interest in satisfying the wishes of the Mexican American listening audience. Programming by the stations is varied and appears to be aimed at the members of the Mexican American population who are 30 years old or older. Music, news, and sports constitute the typical programming, with occasional "talk shows" and "call-in shows" also

available. The viability of these programs is great, and the program topics are made significantly important because of the radio announcers that the stations employ. It would appear that the message carried by the stations has a strong bearing on the maintenance of the Spanish language and Mexican culture in the Southwest even though the younger Mexican Americans (those under thirty) might listen to radio programs in English.

Religious influences are noticeable throughout the west and the south sides of the community. There are several Roman Catholic and Protestant churches in the area. According to two local priests, a large number of Mexican Americans, young and old, are Catholic, but the extent to which they attend church is waning; and this is evidenced by the fact that Sunday services in the churches and the cathedral often lack participants. Attendance at any of the Sunday services will reveal large numbers of middle-aged or older Mexican Americans and few young members. The importance of this observation can only be conjecture and is not a part of this study.

The School

The subjects who participated in this study attended one of the high schools in the community. It is a de facto segregated school in that 49.2 percent of the senior class and 40.2 percent of the freshman class are Mexican American according to a local school survey in 1970. The school itself

is somewhat isolated from the dominant community and particularly far removed from any of the barrios in the colonia. It is seven miles away from the central section of the city, and has a total enrollment of 1683 students with a professional staff of 86 teachers, 4 counselors, and 2 librarians.

The curriculum is typical of most American high schools. It has a college prep program as well as a vocational and terminal program. There are in the prescribed courses for graduation, a number of units to be completed for graduation, and a number of electives. If the student is contemplating college, a vocational trade, or considers himself a high school terminal student, there are special curricular recommendations available to the students. There is also a prerequisite testing program for the college preparatory, vocational trade, and the terminal student.

According to a survey conducted in May of 1970 by the administrative staff of the school, the following information was collected for the freshman members of the student body:

1. 86.3 percent of families live in single housing units.
2. 78.8 percent of families are buying their homes.
3. 80.0 percent of families have a telephone.
4. 40.5 percent of families have two cars.
5. 48.0 percent of families have more than two cars.
6. 75.0 percent of families have B/W TV set.
7. 45.0 percent of families have color TV set.
8. 39.5 percent of mothers are working.
9. 31.3 percent of families earn less than \$8,000.00.
10. 5.5 percent of fathers have four years of college.
11. 40.5 percent of families speak Spanish/English at home.
12. 2.75 percent of families speak Spanish only at home.

13. 40.25 percent of families originated in Arizona.
14. 49.0 percent of families have moved at least once in last five years.

While the data above cannot stand alone, they offer some help in the understanding of the nature of the high school population--particularly if studied from the point of view of the Mexican American population. Other studies conducted in a similar fashion would tend to agree with the result above (Yoshino, 1967).

It is interesting to note that while the freshman class population is nearly 40 percent Mexican American, better than 40 percent of the freshman class speak both English and Spanish at home. It would be safe to assume that at least 50 percent of the freshman class speak Spanish at home some time during the day (since it is known that 40.5 percent of the families speak Spanish/English at home).

The Subjects

The Mexican American students selected for this study were recruited from ninth-grade English classes after a number of their qualifications were evaluated. The first qualification was to allow those students who wanted to participate in the study to indicate their wish to their instructor. This came about after this investigator was allowed to speak to ninth-grade English classes and to inform them of the nature of the investigation. The second qualification was for the interested students to complete a questionnaire. From those completed questionnaires, the

investigator consulted with the teachers of the respective students and pre-selected 30 students to take part in the investigation. At this pre-selection stage there was concern for the identification of participants that would demonstrate varying degrees of bilingualism. Bilingualism, in our usage, refers to the degree with which an individual can communicate in both English and Spanish with native proficiency. An individual who is fluent in English like a native speaker, but who has difficulty in speaking Spanish in this study has been classified as English dominant over English. This kind of identification of bilinguals is simplistic yet it affords latitude in the selection of bilinguals. This investigator has yet to find an appropriate instrument that would rigorously define and separate the "degree" of bilingualism. The terms coordinate bilingual and subordinate bilingual are commonly used to designate those bilinguals who have native proficiency in two languages and those who have native proficiency in only one of the languages respectively as discussed above. Our sample attempted to include only eight students who were classified as coordinate bilinguals, eight subordinate, and four who were classified as nonlinguals or restricted speakers of only one language.

As a final qualification, the investigator established that at least ten boys and ten girls should come from two different sections of English as a further means of determining native proficiency in English. The two sections selected included the college prep and the terminal

English section. Correspondingly, the investigator decided to apply the "grade in class" criteria as a measure of proficiency and adeptness in the English language.

Finally, the investigator met with the students individually, and from that meeting made the final selection of the participants. The participants were chosen as closely as possible according to the following Selection Plan:

<u>Number</u>	<u>Sex</u>	<u>Bilingualism</u>	<u>English Class</u>	<u>Academic Achievement in English Class</u>
2	Girls	Coordinate	College Prep	A-B students
4	Girls	Subordinate	Terminal	C-D students
<u>2</u>	Girls	Monolingual	Terminal	C-D students
10 total		(Eng. & Span.)		
2	Boys	Coordinate	College Prep	A-B students
4	Boys	Subordinate	Terminal	C-D students
<u>2</u>	Boys	Monolingual	Terminal	C-D students
10 total		(Eng. & Span.)		

As a precaution, one other boy and one other girl were recruited as reserves in case one of the selected students decided not to participate in the investigation after its initiation.

Collection of the Data

The data were collected over the span of nine months concurrent with the high school academic year--September to June, 1969-70. The data consisted of information about the metropolitan area, the colonia

Mexicana, the neighborhood in which the school was located, and information obtained from conversations with students and parents in the school and in the barrios. The data collected was recorded in a field manual for later reference. The data also included taped recordings of the student participants on three different interviewing occasions completed throughout the year. The third interview was the one which was later subjected to language-style identification. The student-completed questionnaire was also a source of valuable information with respect to the location of the participant's residence, the radio programs most often listened to, and the language with which they most preferred to talk to their friends. (Appendix B).

While all of the interview sessions with the subjects were held in an empty classroom in the school, conversations with the subjects were also elicited when the investigator met the subjects elsewhere on the school campus and in the community. Conversations with most of the parents took place in their homes after 5:00 p.m. Since it was the intent of the investigator to talk to both parents in English and Spanish, the meetings were arranged in order to insure the presence of both the father and mother after working hours.

The kind of information sought from the parents was primarily about language usage: Do both parents speak English? How long have they lived in this area? Is Spanish spoken at home? How often? Do

they listen to Mexican American radio stations? The responses from these conversations were recorded in a field manual after the meetings and usually along the road or in the privacy of an office at the university. The notes frequently complemented and augmented information acquired from student interviews and the questionnaires.

The only data collected on magnetic tape were from the interviews with the subjects. Data on these voice recordings were transcribed and categorized according to word choice, parts of speech, expression of ideas, use of Spanish slang terms, and degree of bilingualism. A more detailed account of the data and their treatment in this study will be found in Chapter IV.

Treatment of the Data

Factor analysis, as a statistical design, permits a reduction of variables which can be more easily manipulated by a researcher. If, for example, a test consisting of one hundred items needs to be reduced to thirty items it can be accomplished through factor analysis (Harmon, 1967). The theory behind this statistical technique is complex and not completely understood (Nunnally, 1967).

Initially, in factor analysis, the set of variables or measurements are arranged in such a manner as to make the data acceptable to the computer. This amounts to punching IBM cards identifying each of the variables. The data is then processed with the use of the Biomedical Computer Program (BMD, 1964). The data were intercorrelated and the

correlation matrix is reduced mathematically to a smaller number of variables which are thereafter called factors. The factor or factors which hold the measurements together may be specific to the set of observations, or may be common to several sets of observations, or may be categories which break up into several sets of common factors (Nunnally, 1967).

The data in this study were treated in the following manner in preparation for programming:

The variables isolated from the third interview with the subjects are shown below in tabular form for ease of explanation. A detailed account of each of the categories or data sets and how they were treated follows immediately after in the Transcribed Interview:

Frequency responses data set

Counts of:

Nouns
 Pronouns
 Verbs
 Adjectives
 Number of words in conversation
 Number of words over 9 letters
 Independent Clauses
 Dependent Clauses
 Number of words in longest sentence
 Number of sentences before first
 prompt
 Pocho Terms
 Pachuco Terms

Correct responses data set

Correct reading of English para-
 graph
 Correct reading of Spanish para-
 graph

Scaled responses data set

Scaled degree of quality of ideas
 Scaled degree of bilingualism
 Scaled degree of English grammar
 usage

In the frequency responses data set (word counts), the transcribed interview was subjected to counting of nouns, pronouns, verbs, adjectives, as indicated above. These numbers were then utilized as part of the data included for each subject in the factor analysis program.

The correct responses data set (all responses minus errors), consisted of only the correct responses made by the subjects in the reading of an English and a Spanish paragraph. In this instance, the subjects were asked to read a passage from a story and every error in missed words, mispronounced words, or substituted words was counted; the number of errors was subtracted from the total number of words in the passage, and the correct score was used in the factor analysis program. All subjects read the same passage.

For the scaled responses data set (evaluation), then investigator established an ordinal scale from one to four, based on questionnaires, teacher observations, and interviews with the subjects. The scaled responses data set was used in conjunction with the description of the subjects degree of bilingualism and quality of ideas expressed in context of conversations. Quality of ideas as used in this study refers to the relative degree of embedded syntactical structures in a subject's speech.

The BMD computerized factor analysis program permits the selection of the numbers of factors to be rotated. When the factors are rotated. When the factors are rotated, the corresponding eigenvalues for each category can be graphed ("scree" chart) and the "breaking" point of the asymptote determines the relative number of "loaded" factors (Cattell, et al., 1969). Loaded factors are those factors that are mathematically weighed by the inclusion of similar or closely related factors.

With the number of categories reduced, each subject can then be identified on the basis of those loaded factors. The resulting array of student identification characteristics based on the reduced number of factors will make the identification of closely related groups more exact and methodologically reproducible (Stouffer, 1950; Goodenough, 1963b). An example of this technique is shown below as Individual Characteristics:

		R	S	T	U	
	1	x	x			Group #1
	2	x	x	x	x	Group #2
Subjects	3	x	x	x	x	
	4		x	x	x	Group #3
	5		x	x	x	
	---					---

Guttman scaling is a technique for the isolation and identification of characteristics of both large and small populations, and is a

technique that is not often utilized (Goodenough, 1963b). The investigator used it for the identification of the groups or clusters referred to above. Stouffer and Guttman have shown in their studies with military personnel that this technique is an important statistical technique (Stouffer, 1950).

With the groups identified according to the "factor characteristics" sociocultural elements that could have an influence on these characteristics can be sought. Specifically does the sex of a subject influence English usage in a Mexican American have? Does knowledge of Pocho or Pochuco influence the use of Pochuco slang in the Spanish language? Sociocultural influences such as these can be studied with respect to the subject's factor characteristics. In short, the technique strengthens the study of sociocultural influences on identified language styles and is one of the hypotheses of this study. —

The statistical technique employed in studying the sociocultural influences on language styles is the Fisher Exact Probability Test. Other statistical techniques, such as Chi Square or Analysis of Variance will not perform satisfactorily with the size sample that is utilized in this study. The Fisher Exact Probability Test will, however, permit the use of smaller samples, such as we have in this study and as a statistical technique insures reliability of the results. The critical aspect of using small samples lies in the extent to which generalizations can be made. An understanding of the limitations of the smallness of sample should

restrict the investigator from other generalizing from the results.

Summary

This chapter began with a review of Black's criteria for the development of methodological and reproducible models. Adhering closely to his requisites, the investigator proceeded to develop a language-styles identification model. This was followed by a description of the community and the school in which the model was to be tested. The selection of the subjects was also described, setting forth the difficulty in the process of selecting bilingual subjects who represent the full spectrum of bilingual in the community. Lastly, the chapter described the statistical approaches to be used as devices to show the sociocultural influences that impinge on the language usage of the Mexican American subjects.

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

Experimental Results

The purpose of this study was to develop a model for language-style identification. After the model was developed it was tested with a sample population of bilingual Mexican American subjects. From interviews, questionnaires, and conversations with students and parents, this investigation proposed to study the sociocultural influences on the development of the identified language-styles.

Factor analysis and the Fisher Exact Probability Test were used exclusively in this study. The factor analysis technique was used in order to reduce and facilitate the number of variables utilized in identifying the language styles of the subjects. The Fisher Exact Probability Test was used to test the correlation between those cultural elements which influenced language styles.

The language style variables (Table 1) were analyzed using the University of California at Los Angeles Health Sciences Computer Program Number BMD-03M and the printout by the computer yielded the following eigenvalues: 5.90, 3.33, 2.12, -1.77, 1.14. These eigenvalues when plotted against its corresponding position, produced a "scree" chart

TABLE 1
 LANGUAGE VARIABLES MEASURED FROM TRANSCRIBED
 CONVERSATIONS WITH ALL SUBJECTS
 (THIRD INTERVIEW)

Variable No.	Variable
1	Number of nouns
2	Number of pronouns
3	Number of verbs
4	Number of adjectives
5	Number of words in conversation
6	Number of words over 9 letters
7	Number of independent clauses
8	Number of dependent clauses
9	Number of words in longest sentence
10	Quality of ideas (scaled)
11	Number of sentences before first prompt
12	Number of words read correctly in English passage
13	Number of words read correctly in Spanish passage
14	Number of Pocho words correctly identified
15	Number of Pachuco words correctly identified
16	English to Spanish translation
17	Degree of bilingualism (scaled)
18	English grammar-syntax (scaled)

which indicated the adequacy of a five factor rotation (Cattell, 1969). These rotated factors and their corresponding values are shown in Table 2. Shown in Table 3 are the means and standard deviations for eighteen variables. As is the common practice, only those factors having ± 0.5 or greater rotated factor matrix were identified as variables on which loading might have occurred. From the rotated factor matrix only those weighted variables were selected that appeared to be related within their factor column and logical in terms of the language characteristics identified by the variables in the column (Table 4). The identification of the following five categories were identified: (1) Knowledge of grammar rules; (2) variety of expressions; (3) degree of bilingualism; (4) extent of English vocabulary; and (5) knowledge of Spanish. The variables identified as having significant loadings included: For Factor Number 1, variables No. 1, (nouns), 2 (pronouns), 3 (verbs), 5 (number of running words), 7 (number of independent clauses), 8 (number of dependent clauses), 9 (number of words in longest sentence); for Factor Number II, variables No. 10 (quality of ideas), 11 (number of sentences before first prompt), 12 (English reading passage), 15 (knowledge of Pachuco), 18 (English grammar-syntax); for Factor Number III, 13 (Spanish reading), 14 (knowledge of Pocho), 17 (degree of bilingualism); for Factor Number IV, variables No. 2 (pronouns), 4 (adjectives), 6 (number of words over 9 letters); for Factor

TABLE 2

ROTATED FACTOR MATRIX OF LANGUAGE VARIABLES

Variable	Factors				
	I	II	III	IV	V
1	0.70917	0.25701	-0.17225	0.48160	-0.02736
2	0.64636	0.12044	-0.09317	-0.59888	-0.30734
3	0.89561	-0.01791	0.07218	-0.08444	-0.17844
4	0.29404	-0.18509	-0.03337	0.82497	-0.09043
5	0.91567	-0.20436	-0.00664	-0.04784	-0.00390
6	0.03289	-0.11421	0.22780	0.80024	-0.39210
7	0.75434	-0.16424	-0.09316	0.39678	-0.19471
8	0.82924	-0.14964	0.17683	0.34541	0.16157
9	0.50951	0.06999	0.32922	0.41926	-0.12103
10	0.11812	-0.71867	0.31337	0.23189	-0.17851
11	0.34246	-0.66016	0.23229	0.37170	0.17104
12	0.00812	-0.79321	0.13319	-0.06727	-0.06766
13	-0.13162	-0.30006	0.83899	-0.04001	-0.06095
14	0.27036	0.29275	0.71344	0.01499	0.30980
15	-0.02140	0.52358	0.32475	-0.02891	0.56183
16	-0.17557	0.06126	-0.12405	-0.21577	0.85112
17	-0.00359	-0.27032	0.87829	0.18814	-0.15151
18	0.14393	-0.57788	0.32992	0.37136	-0.36458

TABLE 3

MEANS AND STANDARD DEVIATIONS FOR LANGUAGE VARIABLES

Variable	Mean	Std Dev.
1	20.681747	6.585585
2	19.499939	7.926756
3	17.999924	7.521395
4	14.954497	8.465466
5	112.045364	30.892227
6	1.590905	1.469012
7	5.181812	3.156796
8	4.681814	2.337811
9	11.318177	2.917700
10	2.227269	0.611929
11	4.363630	1.677452
12	54.090851	12.523909
13	30.636276	21.588181
14	6.954540	2.319219
15	4.590903	2.594113
16	7.545449	5.280028
17	1.772721	0.685343
18	2.090904	0.683762

TABLE 4
VARIABLES WITHIN THE FIVE FACTORS

Factor I Knowledge of Grammar % of variance = 32 eigenvalue = 5.90		Factor II Expression of Ideas % of variance = 19 eigenvalue = 3.33	
<u>Items</u>	<u>Loading</u>	<u>Items</u>	<u>Loading</u>
1 nouns	0.70	10 quality of ideas	-0.72
2 pronouns	0.65	11 sentences before prompt	-0.66
3 verbs	0.90	12 English reading	-0.79
5 running words	0.92	15 Pachuco	0.52
7 indep. clauses	0.75	18 English grammar	-0.58
8 dependent clauses	0.82		
9 words in longest sentence	0.51		
Factor III Degree of Bilingualism % of variance = 12 eigenvalue = 2.12		Factor IV English Vocabulary % of variance = 9 eigenvalue = 1.77	
<u>Items</u>	<u>Loading</u>	<u>Items</u>	<u>Loading</u>
13 Spanish reading	0.83	2 pronouns	-0.60
14 Pocho	0.71	4 adjective	0.82
17 Degree of bi- lingualism	0.88	6 words with 9 letters	0.80
Factor V Command of Spanish % of variance = 7 eigenvalue = 1.14			
	<u>Items</u>	<u>Loading</u>	
	15 Pachuco	0.56	
	16 English to Spanish translation	0.85	

V, variables No. 15 (knowledge of Pachuco), 16 (English to Spanish for translation).

Factor analysis in itself did not permit the identification of language styles. Complete identification of the language styles was not completed until the described factors could be used to identify each of the subjects. Table 5 shows the grouping that occurred as a result of the statistical identification. For the moment it should be noted that maintaining a short-interval conversation in response to a photograph can yield language features that can be readily reduced in number for language-style identification.

From the Pocho and Pachuco language test, the student's awareness and facility in use of these terms was determined (Appendix C). Since it was suspected that the use of either Pocho or Pachuco language, or both, might be responsible for some of the difficulty in English language communication, the factors were subjected to the Fisher Exact Probability Test to determine (1) the degree of correlation of awareness of Pocho and Pachuco between boys and girls, (2) the degree of correlation of awareness of Pachuco and grades in English between boys and girls, (3) the degree of correlation of awareness of Spanish and Pachuco between boys and girls, and (4) the degree of correlation of Spanish usage in the home and grades in English between boys and girls. The correlations found in each case respectively were as follows: (1) 0.0480, (2) 0.0266, (3) 0.0204, and (4) 0.1696 (Table 6). In all cases the Fisher Exact

TABLE 5

SCALOGRAM OF STYLE FACTORS

Subjects	Factor 1			Factor 2			Factor 3			Factor 4			Factor 5		
	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
1	+				+		+			+				+	
2	+				+			+			+			+	
3			+		+			+			+				+
4	+				+			+			+			+	
5	+				+			+			+				+
6			+		+				+		+				+
7	+				+			+			+			+	
8		+			+			+			+			+	
9		+			+			+			+			+	
10		+			+				+		+				+
11			+			+			+			+			+
12		+			+			+			+				+
13		+			+				+		+				+
14	+				+				+		+				+
15		+			+			+			+			+	
16		+			+			+			+			+	
17		+			+			+			+			+	
18			+			+			+			+			+
19		+			+			+			+			+	
20		+			+			+			+			+	
21		+			+				+		+				+
22		+			+			+			+			+	
Totals	6	12	4	7	13	2	3	12	7	9	19	3	9	5	8

TABLE 6
FISHER EXACT PROBABILITY TESTS

Subjects		Spanish in the Home	English Grades	
I	Girls	4	4	= .1696
	Boys	8	2	
		Knowledge of Pocho	Knowledge of Pachuco	
II	Girls	8	1	= .0480
	Boys	10	10	
		Knowledge of Pachuco	Knowledge of English	
III	Girls	1	4	= .0266
	Boys	10	2	
		Knowledge of Spanish	Knowledge of Pachuco	
IV	Girls	8	1	= .0204
	Boys	7	10	

Probability Test calculations were done by factorial method, with the use of a calculator. The suspicions held initially for the cases above were not borne out in all cases. The results of the tests are indicated below.

1. $\alpha = .05$ $p = 0.0480$ calculated

H_0 is rejected,

and boys and girls do differ in respect to use of Pocho and Pachuco. Calculation of statistical error show H_0 to be rejected.

2. $\alpha = .05$ $p = 0.0266$ calculated

H_0 is rejected,

and boys and girls do differ in respect to use of Pachuco language and their grades in English. Calculations of statistical error shows H_0 to be rejected.

3. $\alpha = .05$ $p = 0.0204$ calculated

H_0 is rejected,

and boys and girls do differ in respect to use of Spanish and Pachuco language. Calculation of statistical error shows H_0 to be rejected.

4. $\alpha = .05$ $p = 0.1696$ calculated

H_0 is not rejected,

and boys and girls do not differ in their use of Spanish at home and their distribution of grades in English.

During the second taped interview, the students were asked to read a 61-word English passage and a 49-word Spanish passage borrowed from a ninth-grade English literature text and a ninth-grade Spanish text (Appendix D). The number of errors in pronunciation, the number of

words omitted, and the number of words added to the text, were recorded and counted as errors in reading the English and Spanish. These errors were then subtracted from the number of words in the passages in order to yield a positive score and facilitate interpretation by keeping all scores positive. These scores were also included as variables in the factor analysis.

Both the Pocho and Pachuco variables emerged as significant variables in relation to use of English and Spanish. All four variables were also used as checks on the ascribed degree of bilingualism of the subjects. Using a scale from 3 to 1 to indicate the number of errors made in reading (errors 0 - 3 = 3; errors 4 - 7 = 2; errors 8 - --- = 1); Table 7 was compiled. The table shows the relationship between bilingualism and knowledge of the Spanish language.

The English-to-Spanish translation (Appendix E) and the English reading passage were treated in the same manner as described above. The English-to-Spanish translation and the English reading passage variables were also scaled and they, too, were studied as possible indicators of degree of bilingualism (Tables 7 and 8).

After the completion of the third interview, the two reserve participants in the sample were included in the study. The reasons for their inclusion were: (1) the scheduled distribution of members for each

TABLE 7

SCALED NUMBER OF ERRORS MADE BY BILINGUALS *
(IN SPANISH)

Girls					Boys				
Coordinate Bilinguals (3 - English and Spanish Native Proficiency)									
Student	Spanish Pronun- ciation	Spanish Trans- lation	Pocho	Pachuco	Student	Spanish Pronun- ciation	Spanish Trans- lation	Pocho	Pachuco
1	2	2	2	1	-	-	-	-	-
4	3	3	2	1					
7	3	3	3	1					
Subordinate Bilingual (2 - English Dominant)					(3 - English Dominant)				
3	3	2	2	1	8	3	3	3	2
5	3	2	3	2	10	2	2	3	2
Subordinate Bilingual (2 - Spanish Dominant)					(4 - Spanish Dominant)				
2	3	3	1	1	9	2	2	2	2
19	3	3	2	1	15	2	2	2	2
					20	3	3	3	2
					22	3	3	2	2
Monolingual or Restricted English or Spanish (4 - English Monolinguals)					(1 - English Monolinguals)				
6	2	2	1	1	10	2	2	3	2
13	1	1	1	1					
14	1	1	2	1					
21	3	1	2	1					

Table 7--Continued

Girls					Boys				
Student	Spanish Pronun- ciation	Spanish Trans- lation	Pocho	Pachuco	Student	Spanish Pronun- ciation	Spanish Trans- lation	Poco	Pachuco
(3 - Spanish Monolingual)									
					11	0**	0**	2	2
					12	1	2	1	2
					18	2	1	3	3

SCALED NUMBER OF ERROR MADE BY BILINGUALS
(IN ENGLISH)

Coordinate Bilingual (3 - English and Spanish
Native Proficiency)

Student	English Reading	English Pronunciation	Student	English Reading	English Pronun- ciation
1	3	3			
4	3	3			
7	3	3			

Subordinate Bilingual (2 - English Dominant)

3	3	2
5	3	3

(3 - English Dominant)

8	2	2
16	3	3
17	3	3

Table 7--Continued

Subordinate Bilingual (2 - Spanish Dominant)			(3 - Spanish Dominant)		
Student	English Reading	English Pronunciation	Student	English Reading	English Pronunciation
2	22	2	9	3	3
19	2	2	15	1	2
			20	1	1
			22	2	2
Monolingual or Restricted English <u>or</u> Spanish (4 - English Monolingual)			(1 - English Monolingual)		
6	2	2	10	3	3
13	3	3			
14	3	3			
21	2	2			
			(3 - Spanish Monolingual)		
			11	0**	0**
			12	1	1
			18	1	1

*Scaled errors made by the subjects:

0 - 3 = 4

4 - 7 = 2

8 - ---- = 1

**Non-reader

TABLE 8

SCALOGRAM OF STYLE FACTORS

Lan- guage Style	Student	Factor 1			Factor 2			Factor 3			Factor 4			Factor 5		
		3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
a	4	+			+			+			+					+
	7	+			+			+			+					+
b	1	+				+		+			+					+
	5	+			+				+		+					+
c	2	+			+				+			+				+
	15		+		+			+			+					+
d	20		+		+			+			+					+
	8		+			+		+			+					+
e	9		+		+			+			+					+
	16		+		+			+			+					+
f	17		+		+			+			+					+
	22		+		+			+			+					+
g	3			+	+			+			+					+
	19			+	+			+			+					+
h	14	+			+				+	+						+
	10		+		+				+	+						+
i	12		+		+				+			+				+
	13		+		+				+	+						+
j	21		+		+				+		+					+
	6			+	+				+		+					+
k	11			+		+			+			+				+
	18			+		+			+			+				+

category of Coordinate-Subordinate bilinguals (English-Spanish, Spanish-English dominance) was enhanced through the addition of more factor analysis, (2) current literature available on language studies indicates that numbers as low as 22 can yield important results, if the selection is heterogeneous.

Analysis of Data

The use of the computer to perform tedious numerical manipulations is not to be underestimated; this study would have been very unwieldy had it not been for the use of the computer. The loaded variables identified as significant in relation to their corresponding factors make language-style identification less problematical.

If the variables No. 1, 2, 3, 5, 7, 8, and 9 are grouped into one category and designated as expressing the subject's knowledge of the rules of English, variables No. 10, 12, 15, and 18 grouped into another category designated as expressing variety of expression, variables No. 14, 14, and 17 are grouped into another category designated as expressing degree of bilingualism, variables No. 2, 4, and 6 are grouped into another category designated as vocabulary, and variables No. 15 and 16 are grouped into another category designed as knowledge of Spanish, the number of factors to be manipulated per student decreases and the identification of language styles can be done expeditiously. For purposes of establishing a profile for each of the students, the factors were scaled

3 - 2 - 1, where 3 was more positive than 2, and 2 was more positive than 1. This was done in order to show the relative disposition of the subjects for the variable. Under these conditions the subjects' factor profiles were determined. Table 6 shows the patterns that were observed for the participants. Following Guttman's scale-of-preference technique (Stouffer, 1950), the distribution of patterns was made evident (Table 8). With this kind of distribution it was determined that from the conversation elicited from the 22 participants, there were two discrete language styles identified (from Table 8: a and m) and five others that could be combined into existing groups without distorting the array of the distribution greatly. The Guttman scalogram technique allows for this regrouping (Stouffer, 1950) without much of an effect on the original groups. Applying this grouping technique, group b and c were now included in group a, group d, f and g are included in group e, group i, j and k are now included in group h, and group m is included in group l. This synthesis results in the identification of four distinct language-style groups, whose characteristics include those of groups a, e, h, and l. In outline form these are as follows:

- Language style a
- F₁ exceptionally good understanding of English grammar and syntax.
 - F₂ exceptionally good communication of ideas.
 - F₃ a bilingual whose command of English and Spanish is exceptionally good.
 - F₄ an extensive English vocabulary.
 - F₅ can read and speak Standard Spanish exceptionally well.

- Language style e
- F₁ a good understanding of English grammar and syntax.
 - F₂ a fair communication of ideas; ideas not always clear.
 - F₃ a bilingual whose command of two languages is restricted but understandable.
 - F₄ a fair English vocabulary.
 - F₅ can read and speak Standard Spanish but with some difficulty.
- Language style h
- F₁ a good understanding of English grammar and syntax.
 - F₂ a weak communication of ideas; ideas not always clear.
 - F₃ a monolingual who is restricted in his own native language.
 - F₄ English vocabulary is limited.
 - F₅ can speak Spanish in a broken manner and cannot read it at all.
- Language style l
- F₁ an inadequate understanding of English grammar and syntax.
 - F₂ an inadequate or confusing communication of ideas.
 - F₃ a restricted bilingual who is restricted to his own native language but can speak English in a very limited manner.
 - F₄ English vocabulary is very limited.
 - F₅ can speak Spanish but very haltingly and cannot read it at all.

The foregoing description of identified styles prompts the question of "labeling" the styles with symbols other than a, e, h, l. The number of style changes which may occur in the course of everyday, general conversation, where the context of situations can change according to the individual's status, can only be left to conjecture. The reader should be reminded that a three-degree contingency table would yield a

mathematical probability of 125 identifiable styles (5^3) and to label all of them would be nonsensical. Some kind of grouping in this case would be the answer to the proliferation of styles for a given conversation.

Style analysis for the bilingual Mexican American student can be a significant factor in dealing with his language-based educational problems. This study indicates that for this student sample, there were six subjects who had little or no difficulty with English grammar, seven who had little or no problem with the expression of ideas, and only three who had almost native proficiency in both English and Spanish. Of these three, only two had the same characteristics mentioned above. Only one of the above was a monolingual English speaker. Those classified as one in all three factors numbered 4, 2, and 7 respectively. That is, four were classified as restricted or having inadequate command of English grammar, two as not being able to express their ideas well, and seven participants classified as being monolingual in Spanish or English. In this group, only two of the four participants classified as restricted or having inadequate command of English grammar were classified as having some problems with the expression of ideas; all others did not have this problem. In the same group of four having inadequate use of English grammar, only two were shown to be restricted or as having difficulty in expressing their ideas and being monolingual English speakers as well (Table 8).

These scaleogram findings are significant in another respect; namely, that while the numbers for the cases aforementioned were small (6, 7, 3, 9, 9) only seven of the numbers of the middle group (12, 13, 12, 10, 5) were classed somewhere in the middle of the three-factor continuum. In other words these subjects had little or no problem with English syntax and could express themselves with some facility even though they might have had an average command of both English and Spanish. A survey of these subjects' grades in English, however, indicates that only subjects number 16 and 17 were earning above-average grades in English, while four were earning C grades, and one subject was failing. On the other end of the continuum, the study indicates that the subjects classified as restricted or having inadequate command of English grammar and being limited in their expression of ideas, were also monolingual English speakers who had little facility, if any, with Spanish and were earning D and F grades in their English classes.

The complexities of analyzing the contributions of the student's socioculture to the factors associated with the identification of linguistic styles are numerous and their permutations in conjunction with the infinite possibilities of sociocultural influence make the complexities almost impossible to describe without statistical analysis. From the tests administered and the conversations held with the participants in the investigation, it is possible to make some statements about the influence

of the Mexican American's socioculture on his identified language style (Table 9).

When data from student responses to test items indicating knowledge of Pocho and Pachuco terms were subjected to the Fisher Exact Probability Test to test correlation among the subjects, it was found that boys and girls do differ in respect to use of Pocho and Pachuco. But when the calculated P is treated statistically by regrouping, it can be shown that H_0 is rejected. The significance of this correlation is that boys' or girls' knowledge of Pocismos (Hispanized English words) has no effect on the boys' or girls' knowledge of Pachucismos. This would further indicate that while boys, in particular, have a tendency to know more Pachuco terms, it in itself offers no obstacle to learning the currently more acceptable Pochismo terminology. In this respect, some of the conversations that this investigator held with some of the prominent members of families that the late George Barker described in his dissertation (Barker, 1947a) led him to believe that some of this vocabulary has been incorporated into the language of the males. Words like aguite, ese, chale, la jura, were still well remembered and used on occasion by some of these participants in the Barker studies.

The extent to which the subjects themselves are able to put this terminology to use, therefore, is dependent on the frequency and the varied use of the lexicon by the older members of the peer group. The

TABLE 9

SUMMARY OF SUBJECTS' RESPONSES TO A QUESTIONNAIRE AND TEACHER EVALUATION

Student	Number of years studied Spanish in school	Location of most schools attended	Place of birth	Preferred language usage	Academic scholarship	Father's Occupation
1	0	City	Tucson	Spanish	C - Av.	Air Force Base
2	4	City	Casa Grande	Spanish	B - Above Av.	Construction
3	0	Colorado	Pueblo	English	D - Below Av.	Unknown
4	0	City	Los Angeles, Calif.	Span-Anglo	B - Above Av.	So Pacific RR
5	1	City	New Mexico	English	B - Above Av.	Miner
6	2	City	Tucson	English	C - Av.	Bookkeeper
7	0	City	Cananea, S.	English	B - Above Av.	Miner
8	0	City	Tucson	English	C - Av.	So Pacific RR
9	1	City	Prescott	Span-Eng	C - Av.	Miner
10	0	City	Tucson	English	C - Av.	Car Salesman
11	0	City	Tucson	Spanish	D - Below Av.	Unemployed
12	5	City	Nogales	Spanish	F - Failure	Unknown
13	0	City	Tucson	English	C - Av.	Barber
14	1	City	Safford	English	C - Av..	Truck Driver
15	0	City	Arizona	Eng-Span	C - Av.	Miner

Table 9--Continued

Student	Number of years studied Spanish in school	Location of most schools attended	Place of birth	Preferred language usage	Academic scholarship	Father's Occupation
16	0	City	Tucson	English	B - Above Av.	Hod Carrier
17	0	City	Tucson	English	B - Above Av.	Air Force Base
18	0	City	Tucson	English	F - Failure	Janitor
19	2	City	Tucson	Spanish	C - Av.	Sheet Metal
20	6	Naco	Naco, S.	Spanish	C - Av.	Carpenter
21	0	City	Tucson	English	C - Av.	Truck Driver
22	2	City	Tucson	Spanish	C - Av.	Laborer

evidence attained in this investigation from a relatively small and random sample is that while the older members of the socioculture might be hesitant to admit the knowledge and use of Pocho and Pachuco terms, the use of these terms is extensive in both male youth and adults. This is not to imply that any Mexican American subject can be expected to be fluent in both of these language areas; as the investigation indicates, there are numbers of Mexican American subjects who are monolingual English speakers only.

With respect to the use of Spanish and Pachuco languages, the evidence here suggests that even though Pachuco is prevalent in the Mexican American community and with the Mexican American male students, it does not appear to influence the students' ability to read or speak Spanish. Field evidence in this respect would complement the statistical finding, in that the type of speech required by the situation or the role dictates the use or non-use of slang. Slang is not permitted in some situations, while it might be acceptable in others and the student is obligated to learn this. In the case of the monolingual English speaker, this does not present a problem, since the student most likely will not be familiar with the vocabulary of the Pachuco. While it might appear to be paradoxical to find a monolingual English speaker in a Mexican American barrio, this investigator's field experience would tend to support the notion that there are an ever-increasing number of Mexican American

subjects between the ages of 8 and 16 who are becoming monolingual English speakers. This observation is made with respect to the many visits this investigator made to the local community schools and the study, the questionnaire, and parent conversations.

The application of the Fisher Exact Probability Test to other areas of sociocultural data produced a chance probability that boys and girls do differ in respect to use of Pachuco language and grades in English. The hypothesis that a correlation existed between Spanish slang use and grades in English was borne out. The probability factor of $p = 0.0266$ proved to be smaller than the .05 level of significance. The evidence would indicate that problems of language switching or problems of one language interfering are significant in case of the knowledge and use of slang Spanish. This is not to be misconstrued as meaning that language switching and interference of languages in terms of lexical or syntactical arrangements are not critical or important, but rather, that for this sample of boys and girls there is a correlation between the use of Pachuco and good grades in English.

Boys who know more Pachuco terms also had the lowest grades in English while the girls that were more restricted in their knowledge of Pachuco had the highest grades in English. It must be remembered Pachuco is a slang language that incorporates the grammar, syntax, and

standard Spanish of the southwestern United States, and for the most part is spoken by males in small groups as long as they have some privacy in their conversations.

The discovery that boys and girls do not differ in their use of Spanish at home and their distribution of grades in English was significant. Traditionally, Mexican American girls spend more time at home and as might be expected possibly learn more formal Spanish. This is a high probability assumption stemming from the fact that most of the students' parents listen to Spanish programs on radio and on television, where the language used by the announcers is, according to most parents, a better quality standard Spanish. Girls in this investigation were found to have a better command of Spanish (three were exceptional) than the boys (no exceptional Spanish speakers were observed) and the girls had better grades in English (four had B grades or better) than the boys (two boys had grades of B or better). Whether the boys learned less of the Spanish grammar because they spend less time at home is conjecture because this investigation did not delve into that aspect of the life the students, but from discussion with the participants and field notes kept in respect to time spent talking to parents--father and/or mother--would indicate that girls spend more time (in number of minutes) talking with their fathers and mothers than the boys. At least at this particular age level, this

appears to be the case, although this investigation did not utilize any statistical proof in this area.

Pachuco, argot, and Pocho loan words from English are readily observable in the Spanish language of the Southwest. Not only are Pachuco and Pocho used by first and second generation Mexican Americans but they are better understood by the parents of these children. While the majority of the parents might not wish to have their children speak Pachuco and Pocho, their children do have some understanding of this lexicon.

It is surprising, therefore, to find the indication that Pachuco and Pocho seemingly do not interfere with Spanish in terms of grammatical structuring. For example, in the expression:

(English) Let's go for a ride in the car.

(Standard Spanish) Vamos a un paseo en el coche.

(Pocho) Vamos a raitear en el caro.

(Pachuco) Vamos a raitear en la ramfla.

It appears that the translation from "un paseo" to "a raitear" can easily be accomplished if the speaker is aware of the lexical units. The same would be true of the word

coche or auto	for automobile
(Spanish)	
caro	
(Pocho)	
ramfla	
(Pachuco)	

Other Pocho and Pachuco expressions have been similarly tried and these do not appear to offer difficulty with the vocabulary that, as the statistics indicate, could not be handled by the student if he knew Spanish with enough facility.

Field investigations such as talking to parents would tend to support the impression that the student's command of Spanish is closely linked to the parents' use of and facility with the Spanish language. In the sample for this study, two of the parents (for students number 11, 18) both male and female were highly restricted in their use of Spanish and English. The Spanish they employed was most difficult to understand by this investigator. The Spanish spoken by their sons (the subjects) was also difficult to understand, and the taped conversations of these students are good evidence of this observation. By contrast, the monolingual English speakers' parents could speak Spanish adequately but they seldom practiced it with their children. These same subjects did not show a higher degree of familiarity with Pachuco or with Pocho vocabulary than others in the sample. This can also be interpreted as indicating no relationship exists between familiarity with Pachuco or Pocho and knowledge and facility with standard Spanish. It appears that Pachuco and Pocho are incorporated into the symbolic repertoire of each of the participants on an individual basis and controlled to a large extent by the family. It must be concluded that the Mexican American peer group as

well as the older members of the community, contribute to the establishment of this repertoire in the subjects, and that knowledge of this vocabulary does not interfere with the students' ability to communicate in standard Spanish.

Testing the Hypothesis in View of the Results

In view of the evidence presented, the hypothesis with which this investigation was initiated can now be evaluated.

Hypothesis 1. To test the hypothesis that the social phenomena of language style does exist. The performance of the language-styles identification model in identifying specific language groups proved that this hypothesis was correct.

Hypothesis 2. A working model for the identification of language styles can be constructed. With the use of language elements derived from a photograph elicited conversation, it was possible to identify the most important elements of the language with which to identify language styles. This hypothesis was proven correct.

Hypothesis 3. Language styles can be identified on the basis of this model. The analysis of the results indicates that by computerized factor analysis and Guttman scaling, language styles can be identified. The model proposed then is operational, and this hypothesis was proven to be correct.

Hypothesis 4. Sociocultural influences that affect language styles can be identified through the use of the model. The isolation of factors that led to style identification also yield factors that could be subjected to the Fisher Exact Probability Test and a means of establishing correlations between them. This hypothesis was proven correct.

Hypothesis 5. There are identifiable, socially developed linguistic elements that make one language style dominant over another language style. Language oriented sociocultural influences were identified for one language while language styles were identified in another. The correlation between the two was made and the hypothesis was proven to be correct.

Summary

This chapter presented the experimental results of the investigation. These results were then analyzed in terms of the groups identified and later in terms of social factors that appeared to affect the factor characteristics of the group. The hypotheses proposed initially in the study were then reviewed individually in terms of the results of the investigation.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This investigation was initiated, in part, in response to the need for a language-styles identification model by sociolinguists and educators. According to the literature, the attempts made in this area have been minimal and somewhat restricted in the sense that those who have written about the subject have looked at language styles with preconceived notions of what the styles should be. Their investigations have, for the most part, been verifications of the investigator's prescribed styles. There has been no study in the area of language-styles identification that has directly involved Mexican American students in the southwestern United States.

In the research surveyed there were only minor suggestions made of the applicability of computer use to delve into the question of stylistics; the use of factor analysis as a means of "narrowing down" the number of stylistic variables in order to permit ease of handling was even less noticeable. (This study was well on its way to completion before the publication by Dolezel was made available wherever there are some

references indicating the use of the computer.) The use of the Guttman Scale of Preference as a technique for determining inclinations or preferences by the subjects themselves has never been attempted in the area of language-styles identifications.

The initial phase of this study necessitated the development of a language-styles identification model. This model was developed and criteria for insuring its functional operation were adhered to closely. The language-styles model was based on language elements that could easily be observed in the course of a conversation.

This investigation took language elements and characteristics such as: (1) number of nouns; (2) number of pronouns; (3) number of verbs; (4) number of adjectives; (5) number of running words in conversation; (6) number of words with nine letters or more; (7) number of independent clauses; (8) number of dependent clauses; (9) number of words in longest sentence; (10) quality of ideas expressed; (11) number of sentences before first prompt; (12) ability to read English; (13) ability to read Spanish; (14) knowledge of Pochismos; (15) knowledge of Pachucismos; (16) ability to translate English to Spanish; (17) degree of bilingualism; (18) degree of grammar complexity, from each of the 22 participants and subjected them to computerized factor analysis. This analysis indicated that all of the eighteen variables submitted in the program were significant. Of the eighteen variables, seven were

characterized as being related to the subjects awareness of the rules of English, grammar and syntax, five were characterized as being related to the subjects' expression of ideas or quality of expression in English, three were characterized as being related to the subjects' degree of bilingualism, three were shown to be related to the subjects' English vocabulary, and two were shown to be related to the subjects' knowledge and command of the Spanish language.

Each of these factors was then scaled from one to three (less facility or restricted to greater facility or exceptional) and the subjects were judged by the investigator and assigned one of the numbers for each respective factor. Student scores were scalogrammed (after Guttman) and grouping was accomplished by inspection of the scalogram. Student language styles were identified on this basis--where the situation under which the elements of the conversation was elicited.

The language styles that were identified in this study were as follows:

- Language style a
- F₁ exceptionally good understanding of English grammar and syntax.
 - F₂ exceptionally good communication of ideas.
 - F₃ a bilingual whose command of English and Spanish is exceptionally good.
 - F₄ an extensive English vocabulary.
 - F₅ can read and write Spanish exceptionally well.

- Language style e
- F₁ a good understanding of English grammar and syntax.
 - F₂ a fair communication of ideas; ideas not always clear.
 - F₃ a bilingual whose command of two languages is restricted but understandable.
 - F₄ a fair English vocabulary.
 - F₅ can read and write Spanish but with some difficulty.
- Language style h
- F₁ a good understanding of English grammar and syntax.
 - F₂ a weak communication of ideas; ideas not always clear.
 - F₃ a monolingual who is restricted in his own native language.
 - F₄ English vocabulary is limited.
 - F₅ can speak Spanish in a broken manner and cannot read it at all.
- Language style l
- F₁ an inadequate understanding of English grammar and syntax.
 - F₂ an inadequate or confusing communication of ideas.
 - F₃ a monolingual who is restricted to his own native language but can speak English in a very limited manner.
 - F₄ English vocabulary is very limited.
 - F₅ can speak Spanish but very haltingly and cannot read it at all.

From the other taped conversation with the participants and many conversations with the parents and members of the community, from Pocho and Pachuco word lists, responses to a questionnaire, and from school records made available to this investigator by school officials, it was possible to identify socioculturally related elements to the language styles of the students. Some of these socioculturally related elements included the following statistically verified results:

1. Boys had a better command of Pachuco and Pocho than the girls. The language style of the boys utilized Pachuco and Pocho expressions more frequently than the girls.
2. Girls language styles indicated a better command of English. Girls' grades in English were better than boys.
3. Girls' language styles included a better command of standard Spanish than the boys.
4. The language styles of the boys, which included more Pachuco and Pocho terms, appeared to interfere in their school performance.

From the above it may be concluded that Mexican American girls in this study spent a considerable time at home speaking standard Spanish with their parents and listening to Spanish language radio stations. The result of this influence would be that the girls speak a better form of Spanish than their male peers. The Mexican American males, however, spend a considerable amount of their time away from home and most likely with an all male peer group. The language styles of these peer groups include extensive use of Pachuco and Pocho terms. This vocabulary has been transmitted from the older members of the peer group; the slang Spanish vocabulary they have learned by the time they reach the ninth grade is relatively extensive (Tables 9 and 7).

The appropriate use of the slang vocabulary is also important. Very rarely does a Mexican American ninth grader either converse with his parents in Pachuco, nor does the subject indiscriminantly speak Pachuco anywhere or anyplace. Pachuco language use is dictated by the social situation and the role the subject wishes to enact. Pachuco could be used with members of the male peer group merely to indicate the working knowledge of the language, it could be used by the peer group simply to confuse other listeners. Pachuco language could also be used in any combination of the above or in forms that can best be described by the role to be played within the parameters established by the peer group.

In this last respect, the school offered the Mexican American ninth graders a place where Pachuco and Pocho lexicon can be maintained, learned, shared, and passed on to a new group of incoming ninth graders. In this sample of subjects most of the subjects were born in this locale and have attended schools in this immediate areas for at least the last four years. This assured ample time in which to become familiar with the community, the barrio, and the immediate vicinity around the home.

Other sociocultural elements that this study proposed to delve into was with the influence of religion on language style development. It was stated earlier that field observations and conversations with local priests suggested that church attendance was waning. Because of the lack of substantive data in this respect curtailed any significant results,

and therefore, restricted this study from making any statements in this area.

The same was true in pursuing other socioculture influences such as the father's occupation and its influence on the language development of the sample ninth graders. The data from the sample were not divergent enough to enable this study to reach any conclusions. Most of the subjects' parents were either miners, carpenters, truck drivers, or sheet metal workers and there was no significant difference in the language style identified for the subjects (Table 8).

The language style that was more prevalent in the sample was language style e (Table 8). The subjects who utilized this language style possessed these characteristics: a good understanding of English grammar and syntax; some difficulty in the communication of ideas; a bilingual whose command of Spanish and English was partially restricted; who possessed a fair English vocabulary. The subjects with this language style can read and speak standard Spanish with some difficulty.

The language style that was least prevalent was language style a. The subjects who were grouped in this language style could be classified as coordinate bilinguals. That is to say, they possessed a good knowledge of English and standard Spanish.

The sociocultural elements that directly influenced the identified language styles as determined by this study, therefore, included the following:

1. The nuclear family and its influence on girls' Spanish language which was shown to be significant in the grades made in English (Table 6).
2. Boys were influenced by the male members of the peer group in learning Pachuco and Pocho and the more knowledgeable they were about the slang the more difficulty they had with the English language (Table 6 and field notes).
3. The school offered the boys , more than the girls, a greater opportunity to reinforce their Pachuco and Pocho (field notes).
4. The barrio offered the male subjects a common ground for continual practice and reinforcement of their Spanish language which included Pachuco and Pocho language and which in turn influenced their use of the English language (field notes and Table 6).
5. The language pressures of the barrio, school, and the family indicated a tendency for subordinate bilingualism rather than coordinate bilingualism in the community.

Conclusions

In the analysis of the data, as in the summary of the investigation, it has been shown that an operational language-styles identification model can be described. The rules established for the described model are concise and numbered in such a way as to make the model operational

and the results operationally reproducible. These statements can be made on the basis of testing the described model with data derived from various sources: transcriptions of taped conversations, word tests, questionnaires, and field observations. The analysis of the findings has been synthesized into the following conclusions for this investigation:

1. Language patterns for ninth-grade Mexican American students living in the barrio are modified by the acquisition of Pachuco and Pocho vocabulary. That is, the language is tyalized in the process of growing up in a barrio.

2. The acquisition of Pachuco and Pocho vocabulary by ninth-grade Mexican American males is learned from the older male members of the barrio.

3. Ninth grade Mexican American males are influenced to learn Pachuco and Pocho by their Mexican American peer group.

4. The Mexican American student learns early in the process of growing up when to use, and when not to use, Spanish slang terms in role contexts.

5. Mexican American girls know less Pachuco and Pocho vocabulary than boys, and girls speak better Spanish than boys.

6. Knowledge of Mexican boys' and girls' understanding of the grammatical structure of English, their expression of ideas, their degree of bilingualism, the extent of their English vocabulary, and their command

of Spanish, collectively can help the educator in better understanding the language-based education problems of the Mexican American student.

7. The study of language has an indispensable tool in the form of the computer and various statistical computerized programs that are available.

8. Short-time-interval conversations in a given context can yield language style characteristics of value to the educator.

Recommendations

Based on the analysis and results of this investigation, the following recommendations for further study are noted:

1. Other characteristics such as types of judgments, whether the response is precise or vague, whether the statements are emotional or rational, whether the ideas expressed are clear or hazy, should be tried as a means of testing the reliability of the factor loadings in the computerized factor analysis.

2. Guttman scaling as a technique for grouping student preferences could be tried with factors other than those identified through factor analysis.

3. Increasing the number of students in the sample to 28 or more could result in a better distribution that would allow for use of other statistical designs such as the Mann-Whitney or the Chi-Square tests.

4. A detailed account and analysis of parents', relatives', and the community's social speech could be of great advantage in studying the social contextualized speech of younger Mexican American children.

5. An inventory of the social uses of Pocho or Pachuco every few years could be of great help in determining regional changes in a language.

6. An inventory of the social use of Pocho and Pachuco every few years could be of great help to anthropologists in determining the changes of a language through time.

7. The study of language styles of other bilinguals (other than Spanish and English) could be of help to teachers.

8. The described language styles model could be tried with other bilinguals (other than Spanish and English) to test the reliability of the model.

APPENDIX A

OPERATIONAL SCHEDULE FOR IDENTIFYING LANGUAGE STYLES

I. Controlled Situation

- A. Select a location where taped interview with selected Ss can be held without interruption.
 - 1. Insure that recording equipment is functioning properly.
 - 2. Insure proper seating and lighting.
- B. Make the S feel comfortable; preferably this will be your second or third meeting.
- C. Make the necessary introductions and follow a predetermined format.
 - 1. Insure that Ss know what is to happen.
 - 2. Have questions that are to be asked memorized.

II. Recording of Conversations in Context

- A. Start the recording machine.
- B. Show the photograph to the S.
 - 1. Let the S respond to the photograph before initiating questions.
 - 2. In unhesitating way ask S questions pertaining to the photograph, i.e., what do you think the people are doing? Have you ever seen people do those things before?, etc.
 - 3. Ask only questions that will prompt the S to responding to the photograph.
 - 4. Let the S do most of the talking. When necessary, prompt the S with verbal and non-verbal signals.
- C. When the conversation appears to have reached its end, shut off the machine.
 - 1. Make the S feel that he has accomplished a meaningful task.
 - 2. Thank the S and excuse him from the interview.

III. Analysis of the Recording Tapes

- A. Transcribe the tapes.
- B. From the transcription of the conversations in the context of the photograph, identify the following:
 1. number of nouns;
 2. number of pronouns;
 3. number of verbs;
 4. number of adjectives;
 5. number of words in conversation;
 6. number of words with nine letters or more;
 7. number of independent clauses;
 8. number of dependent clauses;
 9. number of words in the longest sentence;
 10. quality of ideas expressed (develop a scale for classification);
 11. number of sentences before first prompt by investigator;
 12. number of errors in reading an English passage;
 13. number of errors in reading a Spanish passage;
 14. knowledge of pocho terms;
 15. knowledge of pachuco terms;
 16. number of errors in translating an English passage to Spanish;
 17. degree of bilingualism (develop a scale for classification);
 18. knowledge of English grammar-syntax (develop a scale for classification).

IV. Identification of Language Styles

- A. When the number of rotated factors complements the "Scree" graph of eigenvalues, determine the factors that are "loaded" and assign their meaning.
- B. Identify each S, according to the factors isolated and defined.
- C. Use Guttman scatter and scaling techniques to help determine the grouping patterns for the sample.
- D. For each of the identified groups:
 1. Determine what speech characteristics make the group distinct from the others;
 2. Where applicable, use the Chi-Square or Fisher Exact Probability Test to determine if within-group characteristics (sex, family income, etc.) are related.

- E. When the grouping meets the criteria of mutual exclusion, identify the language styles as X, Y, Z, etc.

16. Do most of your friends speak Spanish or English? _____
17. How many years have you studied Spanish in school? _____

APPENDIX C

POCHO AND PACHUCO WORD LIST

TO THE INVESTIGATOR: Read the following words once and allow the participants to respond in Spanish or English.

ENGLISH TO SPANISH

1. chance
2. baloney
3. dump
4. screen
5. lunch
6. match
7. pitch
8. cake
9. soup
10. movies
11. truck
12. switch

SPANISH TO ENGLISH

1. chale
2. aguite
3. ramfla
4. guisa
5. borlo
6. ese
7. frajo
8. gacho
9. la jura
10. jando
11. refinar
12. trola

APPENDIX D

ENGLISH AND SPANISH READING PASSAGES

TO THE PARTICIPANT: Study the short paragraph below, then read the passage out loud.

ENGLISH

"With that he lifted his hammer, but the great form of the giant dissolved into wavering mist before his eyes. A mocking laugh sounded near him. Thor whirled in fury and beheld the outlines of the citadel and all that it contained grow dim. In another second they too had scattered into air. 'Remember your promise,' said the voice. 'Never again!'"

From "Thor and the Giant King"
Olivia E. Coolidge

SPANISH

"---Mira, Panchito---le dije,--- nunca te lo he dicho, sabes?
perio yo soy profesor de espanol; oye bien, professor en una universidad de Boston muy grande.
> --- Profesor de espanol?
---Si.
---Pues, senor, es una lastima que Vd. no lo haya aprendido del todo bien. Yo lo hablo mucho mejor."

From "Un Mejicanito"
Pedro Villa Fernandez

APPENDIX E

ENGLISH-TO-SPANISH WORD LIST

TO THE PARTICIPANT: Read the English words once and translate into Spanish. Pause between each set of words.

1. much
2. maybe
3. sleep
4. call
5. you
6. come
7. from
8. same
9. orange
10. cause
11. air
12. crying
13. dog
14. egg
15. operation

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