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A COMPARISON OF GEOGRAPHICALLY DIFFERENTIATED RURAL
MEXICAN CHILDREN USING THE SPANISH VERSION OF THE ILLINOIS
TEST OF PSYCHOLINGUISTIC ABILITY

The University of Arizona

PH.D. 1982

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A COMPARISON OF GEOGRAPHICALLY DIFFERENTIATED RURAL
MEXICAN CHILDREN USING THE SPANISH VERSION OF
THE ILLINOIS TEST OF PSYCHOLINGUISTIC ABILITY

by

William Arthur Young

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF COUNSELING AND GUIDANCE

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

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THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

As members of the Final Examination Committee, we certify that we have read
the dissertation prepared by William Arthur Young

entitled A COMPARISON OF GEOGRAPHICALLY DIFFERENTIATED RURAL
MEXICAN CHILDREN USING THE SPANISH VERSION OF THE
ILLINOIS TEST OF PSYCHOLINGUISTIC ABILITY

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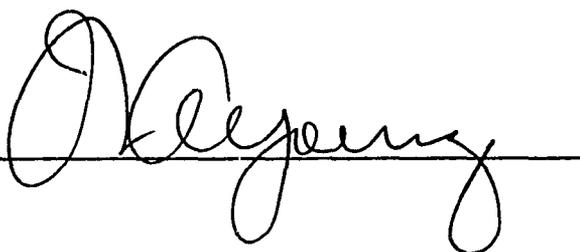
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SIGNED: _____

A handwritten signature in black ink, written over a horizontal line. The signature is cursive and appears to read "R. J. ...".

DEDICATION

This dissertation is dedicated to the people of Santa Rosalillita who enabled our entrance into their community, treating us as neighbors and friends;

and

to Miguel Carreon, Jose Carreon and Ermalinda Favela who opened their homes to us and supported us through their tolerance and acceptance in the pursuit of this study.

ACKNOWLEDGMENTS

There are several people I would like to acknowledge for their help and support in completing this project. I would like to express my deep sense of gratitude and appreciation to my wife, Susan, who never wavered in her support and encouragement of me or this project. Her willingness to participate in this effort, at times in the face of hardship and personal sacrifice, has been a model of courage for me and for our children.

To my daughter, Rebecca, I would like to express my appreciation for her willingness to meet the demands of many new situations which at times required personal risk and sacrifice. Her presence in our daily lives helped to make our little cove in Baja California a place filled with happiness and magic.

To my son, Erik, I would like to offer my gratitude for the exploration in his soul and his unbounded curiosity. Following in Erik's footsteps enabled the opening of many new windows to the environment we thought we knew. The world is his native land.

I would like to thank my chairman, Dr. Oscar Christensen, for helping me to mold my dream into a workable reality. His consistent portrayal of respect and encouragement will serve as a model throughout my life.

I would also like to express my appreciation to Dr. Phil Lauver and Dr. Harley Christianson, who supported and encouraged my work and who offered valuable critical assistance with this project.

Dr. Lucinda Alibrandi of Addiction Studies has consistently encouraged and directed my learning inquiry into avenues previously unknown to me. I would like to thank her for endorsing and supporting the explorer side of me.

My special thanks to Dr. Aldine von Isser of Special Education who went well beyond her commitment to me as a student in creating opportunities for me to develop within her discipline and allow for my contribution to the field of Special Education. This project would still be a dream without her support and assistance.

Finally, I want to thank my parents, William C. and Lynette Young, for their support of me and my family in our effort to undertake this project, and my parents-in-law, Wallace and Beulah Ashcroft, for their willingness to assist us in the preparation and return stages of our trip.

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ABSTRACT

The purpose of this investigation was to examine the cognitive and psycholinguistic processes of rural Mexican children and compare them to urban Mexican children using the Spanish Version of the Illinois Test of Psycholinguistic Ability as the primary diagnostic instrument. Additionally, Physical, Environmental, and Psychological test correlates are surveyed to demonstrate their application in the diagnostic and interpretive processes.

Fifty-nine children, aged four to nine, were tested in this project. The children were all monolingual Spanish speaking, and they all lived in or very near Santa Rosalillita, a small mid-peninsula fishing cooperative in Baja California, Mexico.

The cumulative total of the I.T.P.A. subtest raw scores for the Santa Rosalillita children are compared to the scores of two samples of urban children which were used in the I.T.P.A. standardization procedure. A series of t tests are used to analyze the data.

The Physical, Environmental, and Psychological test correlates are examined by using obtained I.T.P.A. profiles, a questionnaire, and the author's on-site observations. The relevant results of this study are:

1. There appears to be a significant difference between the five year old children of Santa Rosalillita when they are compared to the two groups of five year old urban Mexican children.

2. There were no significant differences between the seven and nine year old groups of Santa Rosalillita children when they were compared to the seven and nine year old groups of urban Mexican children.
3. Physical, Environmental, and Psychological test correlates can provide important information in the diagnosis and interpretation of the Spanish I.T.P.A.

It was concluded that extreme caution be used with the Spanish I.T.P.A. when it is employed with rural Mexican children below the age of six. The results suggest that the Spanish I.T.P.A. be used as one of several sources of information in the effort to serve the educational needs of Mexican children, but not as the only source of information.

Further research may focus on rural children living in other geographic locales of Mexico, or on the development of appropriate and useful educational methods and materials for assimilating Mexican youngsters into American schools.

La hora es transparente
Vemos, si es invisible el pajaró,
el color de su canto.

The time is transparent:
even if the bird is invisible
let us see the color of his song.

Octavio Paz

CHAPTER 1

INTRODUCTION

According to the 1978 Annual Report of the U.S. Department of Immigration and Naturalization (the latest published), over 700,000 Mexican citizens legally immigrated to California, Arizona and Texas that year. They were joined by 976,600 of their fellow countrymen who, in 1978, came to the United States illegally.

Although exact statistics are not available, it is believed that most Mexican nationals make their entry into the United States through Tijuana, Mexicali and Ciudad Juarez. Many look for jobs and try to settle in the south of Texas, southern Arizona, and in California below San Francisco. Some find jobs in the great urban centers of Oakland, San Jose, Los Angeles, San Diego, Phoenix and Tucson. Others become harvesters in the sprawling and fertile valleys of San Joaquin or Imperial. Still others go to school.

Those who enter the American educational system come face to face with barriers and uncertainty (Levario 1974). They typically speak little English. Usually, they are poor, inadequately educated, and live in transient conditions. They find it hard to fit in. Often they are forced to move before they can achieve social acceptance.

As more and more Mexican children filter into schools, American educators are confronted with a paradox. Professional school personnel

are trained to be, among other things, well-versed in communications skills. With new arrivals from Mexico, the usual circuits that enable the transfer of meaning are shorted. The effect is similar to an overload, when in fact, an underload occurs. With little communication taking place, only particles of information are collected. As a result, guesses about placement and useful academic programs are often made on the basis of fragments (Saldate 1972).

To illustrate, the author conducted a survey of 20 southern Arizona school districts. Of the 20 contacted, only four had systematic district-wide procedures for receiving and assimilating monolingual Spanish speaking children into the system. Additionally, none of the districts utilized any diagnostic instrument designed to assess learning capabilities and deficiencies. Only five of the 20 made use of the Language Proficiency Measurement which is designed to assess the degree of proficiency in English and Spanish. Only five of the districts had a bilingual education program ongoing; others relied on the services of bilingual classroom aides. It appears that Spanish speaking children immigrating to southern Arizona can look forward to little more than the luck of the draw in acquiring assistance with their educational needs.

This study, in part, investigates some new ways to work with recently immigrated Spanish speaking Mexican youngsters in American schools.

Problem Statement and Purpose

Spanish speaking children have not, to date, had the benefit of standardized diagnostic procedures in their native language. As a result, critical pieces of information regarding their academic strengths and weaknesses are seldom assessed. The purpose of this study is to provide information for professional educators and psychologists in Mexico and the United States concerning the learning processes of rural Mexican children. Specifically, two primary research questions will be addressed:

1. How will the scores and test profiles of school aged youngsters, ages four to nine, living in a rural Mexican environment compare to the standardized norms of the Spanish Version of the Illinois Test of Psycholinguistic Ability (La Prueba Illinois de Habilidades Psicolinguisticas)?
2. How can supportive correlated information be used to explain and describe the performances of the rural Mexican children on the I.T.P.A.? The supportive information can be divided into three basic categories which follow:
 - a. Physical correlates such as mixed laterality, poor body image, malnutrition, chronic disease, visual, or auditory defects.
 - b. Environmental correlates, such as birth order position, psychological position, family atmosphere, lack of school experience or isolation.

- c. Psychological correlates such as poor visual or auditory perception and discrimination, slow understanding and interpretation of concepts, or minimal motor and verbal skills.

These correlates can be viewed in the context of cause and effect relationships or they can be viewed teleologically. To demonstrate these: a cause and effect relationship might refer to an element of organicity; the possession of neurological disability. Teleologically, the observed disability might be seen in the light of socially relative purposiveness. That is, the perpetuation of the disability creates individual uniqueness and stabilizes a prototypical role. In short, the use of a disability may be as important a consideration as the possession of a disability.

Following from the stated purpose of the study, additional research questions will be addressed. These are:

1. Is the Spanish Version of the Illinois Test of Psycholinguistic Ability appropriate for use with rural Mexican children immigrating to the United States?
2. What are some of the educational needs of rural Mexican children as demonstrated by their scores on the Spanish I.T.P.A.?
3. Are there specific items in the Spanish I.T.P.A. which are not appropriate for use with rural Mexican children?
4. How might a specific rural Mexican environment impact youngsters and their performance on the I.T.P.A.?

5. How does the concept of the importance of psychological position hold up with rural Mexican families?
6. How do rural Mexican children perceive education?
7. Is the concept of teleology useful in interpreting data obtained from the I.T.P.A.?

Significance of the Study

Other than one study done with bilingual children (McCall-Perez 1980), no published reference is available on the Spanish Version of the Illinois Test of Psycholinguistic Ability. Since the test was standardized exclusively on urban children in Mexico, Puerto Rico, Chile, Peru, and Colombia, it has never been used with rural Mexican children, and can therefore be seen as an exploratory instrument.

The literature which inquires into the cultural and psychological development of the Mexican people virtually ignores variables such as birth order, family atmosphere, and the concept of teleology as a way to explain behavior. As a result, this study provides a contribution in three primary ways:

1. It provides needed information for the continued standardization process of the Spanish adaptation of the Illinois Test of Psycholinguistic Ability.
2. It provides information about a different way in which to interpret the I.T.P.A., namely from the viewpoint of social relativism, which can be seen as a supplement to its more traditional use as a tool to diagnose cause and effect relationships.

3. It provides information in regard to three important interpretation differentiations; specifically the physical, environmental and psychological correlates.

Despite its recent arrival, the Spanish I.T.P.A. is quickly being assimilated. It has been purchased by over 150 school districts in the southwestern United States. It promises to be a standard instrument for use with Spanish speaking people in the near future. As a result, it seems evident that standardization needs to be completed. Professional educators and psychologists will need complete and accurate standardization and statistical information if they are effectively going to serve Mexican school children.

In addition, by creating the awareness that the use of a trait to provide a social impact may be as important as inquiring into the cause of a trait, the researcher hopes to enable a more enlightened and encouraging diagnosis and more appropriate remediation programs.

Further, by providing information about the variable of psychological position, it is hoped that professionals in the helping professions will gain an awareness of the importance of this concept as an aid in understanding children.

Definition of Terms

For the purposes of this study, the meaning of words and terms are those commonly held. The following definitions apply:

Auditory discrimination--The ability to differentiate sounds, particularly those comprising speech or language.

Auditory perception--The ability to interpret or organize the sensory data received through the ear.

Behavior--Observable actions.

Body image--An awareness of one's own body and the relationship of the body parts to each other and to the outside environment.

Family atmosphere--The climate, characteristics or prevailing model established by parents and presented to the children as a pattern of social living.

Mixed laterality--The tendency to perform some acts with a right side preference and others with a left side preference, or the shifting from right to left for certain activities.

Ordinal birth position--The ordered position to which one is born in a family; the numerical sequence of births in a family.

Psychological position--The subjective birth order as viewed by the individual. The subjective perceptual picture and emotional support developed by an individual in the creation of his or her role as part of a family system.

Teleology--Cause as to purpose. The use of design or purpose as an explanation of natural phenomena.

Visual discrimination--The ability to detect differences between different objects, forms and/or letter symbols.

Visual perception--The identification, organization, and interpretation of sensory data received by the individual through the eye.

Assumptions of the Study

For the purposes of this study, it is assumed that:

1. Because the Spanish Version of the Illinois Test of Psycholinguistic Ability is still largely untried, its construct validity and reliability insufficiently verified, the test must be seen as an experimental and exploratory instrument. No assumptions regarding the reliability, construct validity, or capability to diagnose differentially are made.
2. The administration of the I.T.P.A. to rural Mexican children by an Anglo researcher will not significantly modify the results.
3. The Mexican children who are interviewed and tested will answer truthfully and try to the best of their ability.

Limitations of the Study

This study will be limited by the following factors:

1. Although the sample of rural Mexican youngsters used in this study can be seen as a statistically legitimate representation, caution should be exercised in any attempt to generalize the data to populations other than rural Mexican children living in Baja California, Mexico.
2. A single observer was used and therefore no opportunity existed for inter-observer test for agreement.
3. Fatigue during test administration may have affected some of the test scores.

The Illinois Test of Psycholinguistic Ability

In 1949 Dr. Samuel Kirk, then Professor at the University of Illinois, saw the need to evaluate and diagnose children with learning problems so that specific educational programs in remediation could be provided. Among the children he worked with were several youngsters who were classified as mentally retarded, but who actually had very specific learning disabilities and who were not mentally retarded at all. By attempting to isolate problems in the receptive, associative, and expressive modes, Dr. Kirk hoped to provide specific remediation by using strengths observed in the youngsters to help correct a processing inadequacy. Typical clinical procedure at that time provided for the use of instruments such as the Stanford Binet, the Kuhlman Tests of Mental Development and the Vineland Social Maturity Scale. These tests yielded global scores and in general did not provide information which would help to delineate specific processing disorders (Kirk 1976).

Attempts to develop a comprehensive diagnostic test for school children began in 1951 and by 1961 an experimental edition of the Illinois Test of Psycholinguistic Ability (Kirk, McCarthy and Kirk 1961) resulted. The I.T.P.A. attempts to isolate specific skills uncontaminated by other functions. It utilizes ten subtests to extract information about specific processing functions in school aged children.

In 1980, Dr. Aldine von Isser, working with Winifred Kirk at The University of Arizona, successfully completed and published the first Spanish Version of the Illinois Test of Psycholinguistic Ability (von Isser and Kirk, 1980). The Spanish adaptation is the primary instrument which will be used to conduct this study.

The Spanish I.T.P.A. is based on the same clinical model as the English version. The test consists of the following ten subtests:

1. Auditory Reception	Comprensión Auditiva
2. Auditory Reception	Comprensión Visual
3. Auditory Association	Asociación Auditiva
4. Visual Association	Asociación Visual
5. Word Fluency	Fluidex Léxica
6. Manual Expression	Expresión Motora
7. Auditory Closure	Integración Auditiva
8. Visual Closure	Integración Visual
9. Auditory Sequential Memory	Memoria Secuencial Auditiva
10. Visual Sequential Memory	Memoria Secuencial Visomotora

In Psycholinguistic Learning Disabilities, Diagnosis and Remediation, Kirk (1976, pp. 20-21) explains the clinical model of the I.T.P.A.:

The hypothetical construct on which the I.T.P.A. is based relates those functions whereby the intentions of one individual are transmitted (verbally or nonverbally) to another individual and, reciprocally, functions whereby the environment or the intentions of another individual are received and interpreted. It attempts to interrelate the processes which are involved, for example, when one person receives a message, interprets it, or becomes the source of a new signal to be transmitted. It deals with the psychological functions of the individual which operate in communication activities.

According to Kirk, the I.T.P.A. taps two channels of communication. These are the routes through which the content of communication flows. The channels may include various combinations of sensory input

and response output. Auditory and visual channels are the primary input modes measured by the I.T.P.A. Vocal and motor response modes are the primary channels of output.

Further, Kirk suggests that in regard to analyzing behavior which occurs in the acquisition and use of language, three main processes are considered:

1. The receptive process which deals with recognition and/or understanding of what is seen or heard.
2. The organizing process which deals with education of relationships from what is or has been seen or heard.
3. The expressive process which deals with the use of those skills necessary to express ideas either verbally or by gesture or movement.

Kirk also describes two primary levels of functioning which are distinguished from one another in the I.T.P.A.:

1. The representational level includes behavior which requires the more complex mediating process of utilizing symbolism in the transfer of meaning. Visual and Auditory Association and Manual Expression are examples of communication at the representational level.
2. The automatic level includes communication behavior requiring less voluntary but highly organized and integrated patterns. Visual and Auditory Closure, speed of perception, ability to reproduce a sequence seen or heard, rote learning, synthesizing isolated sounds into a word and utilizing the redundancies of

experience are all examples of communications activities at the automatic level.

Reliability and Validity of the I.T.P.A.

A large number of studies have focused on the English version of the I.T.P.A. which supplies the theoretical model for the Spanish adaptation. Since its emergence, questions have been raised in regard to the statistical analysis of reliability and validity measures on the I.T.P.A.

The reliability of the Spanish I.T.P.A. is presented in Table 1 with regard to test-retest reliability coefficients. The figures in this table are in contrast to a study of reliability on the English I.T.P.A. done by Paraskevopoulos and Kirk (1969) in which internal consistencies of .80 and better were reported for all subtests except Visual Closure. The Paraskevopoulos and Kirk report was questioned by James Lumsden among others, who called attention to the five month interval between the test and the retest.

The reliability coefficients in Table 1 portray an inconsistency which does not allow for subtest comparisons on the Spanish adaptation.

In addition to the issue of reliability, three other topics relating to the validity of the I.T.P.A. seem appropriate for inclusion here. The first is the appropriateness of the term "psycholinguistic" when used as a descriptor of the I.T.P.A. The second relates to the adequacy of the test in measuring the constructs on which it is based. The third relates to the educational significance of the instrument.

Table 1. Table of reliability

Subtest	Age 3	Age 5	Age 7	Age 9
Visual Closure	.63	.76	.75	.76
Auditory Comprehension	.85	.87	.78	.80
Motor Expression	.69	.68	.75	.74
Auditory Memory	.74	.81	.78	.83
Auditory Association	.89	.90	.87	.80
Visual Association	.81	.83	.71	.68
Visual Memory	.73	.78	.72	.68
Verbal Fluency	.78	.77	.80	.80
Visual Comprehension	.84	.83	.63	.43
Auditory Integration	.82	.85	.80	.77

Several individuals, J. Lee Wiederholt among them, currently question the use of the I.T.P.A. as an appropriate measure for psycholinguistic functioning. The psycholinguistic field is comprised of professionals who are, for the most part, concerned with the nature and acquisition of language in children. The way children acquire language has been described in markedly different conceptualizations by various professional linguists. For example, some draw heavily from the work of linguist Noam Chomsky on the nature of language. Others find the work of psychologist B. F. Skinner to be noteworthy. Kirk, McCarthy, and Kirk (1961), authors of the English version of the I.T.P.A., have

chosen the Process model of Charles Osgood as the theoretical base for the development of their instrument.

As a result, the choice of the term "psycholinguistic" as a reference to the function of the I.T.P.A. would likely be disputed by professional linguists who embrace a point of view other than the Process model of Charles Osgood.

Construct validity studies are critical in determining how well a test measures the constructs upon which it was based. Typically, factor analysis is the method employed when studying the construct validity of a test. The English version I.T.P.A. subtests have been factored using criterion tests most recently by Newcomer et al. (1976). In this study, the I.T.P.A. constructs of levels of organization and processes of communication were substantiated. The modality dimension of the test, however, was not supported. As a result, the investigation provides some support for the I.T.P.A. as a valid measure of the Osgood-Kirk Process model.

The third and last issue relates to the educational significance of the I.T.P.A. This point is important because young children who are experiencing academic difficulty are often tested on the I.T.P.A. If the child's performance on the test is low, specific remedial programs are recommended.

One way to determine the educational significance of the test is to correlate scores on the I.T.P.A. with measures of academic achievement. Another way is to implement I.T.P.A.-based remediation procedures and analyze children's improvement both on the I.T.P.A. scores and academic measures.

Approximately 24 studies have dealt with the concurrent relationship between the I.T.P.A. and various measures of academic achievement. Newcomer et al. (1976) attempted to consolidate and summarize the information in each of these studies. They reported that the Grammatic Closure subtest remained alone as a statistically significant corollary to academic achievement.

Many researchers have studied the I.T.P.A. as a long term predictor of academic achievement. The results of these studies are so contradictory that it is impossible to make any clear judgment on the predictive capability of the I.T.P.A.

Approximately 40 research studies in which attempts were made to improve children's scores on I.T.P.A. process variables have been undertaken. These intervention studies have utilized children who were normal, mentally retarded, learning disabled, disadvantaged, etc. The results of these studies have demonstrated marked similarities. In most cases, growth in these process variables has not been increased by general or specific I.T.P.A.-related training.

In summary, the English version of the I.T.P.A. appears to reflect admissible reliability and construct validity. There are questions regarding the selection of the term 'psycholinguistic' when referring to the function of the test and its usefulness as a diagnostic tool in education.

The Spanish I.T.P.A. was chosen for this study because:

1. It is being used in schools without the benefit of complete standardization.

2. It is designed exclusively for monolingual Spanish speaking youngsters and the children in this study are all monolingual.
3. It provides information about the cognitive development of an individual notwithstanding its claim towards differential diagnosis.
4. It is potentially useful in the creation of educationally sound programs for assimilating immigrating Mexican Children.

Some Factors Related to Test Interpretation

Disabilities have traditionally been investigated within the rubric of cause and effect scientism. This proceeds logically from medical practice in which etiological concerns undergird the disclosure of symptoms. Symptoms are seen as clues, not causes. From this posture, humans are seen as divisible. Causes, in theory, are discovered when reduction proceeds to its lowest most technical terms. By discovering the components of a disorder, causes can be understood and possibly treated. The treatment of a symptom, then can be seen as futile if the cause of a disorder is not found and eliminated. To illustrate, a fever is typically not seen as a basic problem, but rather as a symptom of some fever-producing agent.

When individuals are seen as isolates, there is perhaps a tendency to view them in terms of their possessions. A statement such as, "He has dyslexia," would serve to illustrate the point. It is implied here that someone possesses something. Viewed within the context of reductionism, dyslexia can be seen as the developed symptom of brain damage, central nervous system dysfunction, a genetic or inherited

reading disability, maturational lag syndrome or unacceptable classroom reading methods, to name a few possibilities.

Additionally, a trait such as dyslexia can be viewed from at least one other dimension. Allowing that man can be viewed as a social being, not in isolation, then the environment in which any given human being finds him/herself becomes significant. Furthermore, if man can be conceived of as a unity, that is holistically, it may not be as useful to divide and reduce him as it may be to assess the patterns of his movement within his field of relationships.

By putting man in a social setting and viewing him in terms of his holistic pattern development, it becomes possible to view his behavior differently also. Instead of explaining behavior lawfully, in terms of cause and effect relationships, behavior can be regarded as goal directed, that is, movement towards subjectively perceived goals in an individual's phenomenological field. When viewed in this teleo-analytic way, a new dimension is opened. It becomes possible to view behavior as purposeful rather than reactive. Talk of use rather than possession is now appropriate.

By looking at the statement used earlier, "He has dyslexia," an inquiry into the use of dyslexia becomes significant. Dyslexia could potentially be used to achieve a number of goals rooted in an individual's social milieu.

For example, dyslexia could be used to gain significance and attention. It could be used to prove that, "No one in the world can make me read!" It could be used as a way to inflict emotional pain,

"If it is important to you that I read, I can hurt you by not reading." If a person's goal centers on proving his or her uselessness, dyslexia can be a way to say, "I quit." By viewing dyslexia from a teleological context, it might be possible to discover a discouraged child rather than a physically incapable one.

If the Spanish Version of the I.T.P.A. is, as it purports to be, an attempt to get beyond symptoms, then the usefulness of multidimensional interpretation becomes evidential. Additionally, a variety of related factors provide the potential for a more accurate diagnosis. Kirk (1976) has suggested three correlate categories: Physical, Environmental, and Psychological.

Physical Correlates

As mentioned earlier, this category includes factors such as mixed laterality, poor body image, malnutrition, chronic disease, visual defects and auditory defects. An examiner's awareness of any of these areas offers potential assistance in a more thorough diagnosis and remediation program.

Using malnutrition as an example, it is possible to see a variety of ways in which this condition can influence the diagnosis. Is the malnutrition the result of poverty, ignorance or both? Is it possible that a youngster could be using poor eating habits to gain entrance to a social group, "the cola and candy for lunch bunch," or as a way to tell a parent that s/he will eat as much or as little as s/he wants regardless of what s/he is told? Viewed this way it becomes possible for

a wealthy and educated family to experience the condition of malnutrition.

It is obvious that malnutrition can affect a youngster's performance in a testing situation. When malnutrition is seen as a correlate, it becomes important to understand the dimensions and dynamics of the condition so that a useful diagnosis can be formed.

Environmental Correlates

Environmental correlates include the circles of significant interaction in an individual's life. Birth order position, family atmosphere, school experience or the lack of school experience are all examples.

To demonstrate the contingency of these correlates to test diagnosis and interpretation, the examples of birth order position and psychological position will be used. Much of the literature about these concepts draws heavily from the work of noted Viennese psychiatrist, Alfred Adler. Writing from 1907 to 1937, Adler advanced a theory of psychology which took into account and indeed was based upon, the individual's creation of a perceptual field. Adler believed that humans are primarily social beings who strive to find their place in a social group.

The first social group that human beings typically encounter is the family. For the youngster to feel that he belongs in the family, he must create a place for himself. According to Adler, he does this in three ways:

1. He creatively responds to the environment in which he finds himself.
2. He assesses the impact of his behavior on others in the environment.
3. He creatively uses his innate abilities or disabilities.

As a result, a basic assumption of Adlerian psychology is that personality and character traits are forged by way of movement within the family group. This is in contrast to other assumptions which attribute the main development to heredity, psychosexual development, general individual development principles or strictly environmental stimulations. The concept thus far outlined is generally referred to as the Family Constellation. As a dynamic expression, the concept of Family Constellation sees development not so much the result of factors converging on the child, but that of the child's interpretation and related interaction with factors in his environment. He influences the group and other members of the family as much as he is influenced by them. Each child in his early relationships to other members of the family group establishes his own approaches to others in an effort to gain a place in the group.

It follows that each new addition to a family will force a change in the family. It is then possible to suggest that no child is ever born into the same family. The perception and interpretation of the world and the people in it is likely to be different for two children born into the family. A first born son, as an example, might perceive things quite differently from a daughter born third out of

five. Because of this, it is possible to see that the ordinal birth position of any given individual might be an important piece of information to obtain in an effort to understand that human being. In fact, Adler taught that in the life pattern of every child there is the imprint of his position in the family with its definite characteristics.

The general characteristics of ordinal birth position are subject to a variety of influences. If there are a number of years between the birth of children (more than five years), each child is likely to have some of the characteristics of an only child. In some cases, "sets" of children occur with large spaces of time between them. In these situations, two or even three separate families may be described. As an example, a "set" of three children each two years apart may be followed by another "set" of three children six years later. It is possible that in situations like this, two children will exhibit first born characteristics, the first born of the first set and the first born of the second set.

The development of an only girl among boys or of an only boy among girls presents a different problem. It is possible that roles might shift in such situations, or that extensions into masculine or feminine roles may develop.

In another situation, the role of the first born may be assumed by an assertively successful second born. The discouraged first born may then start to act more like a second born, and so the roles reverse despite the ordinal birth position. Ansbacher and Ansbacher (1956) produced a synthesis of Adler's work. The foregoing aspects of

Adlerian theory are taken from their book, The Individual Psychology of Alfred Adler.

Clearly, there are a number of variables which render ordinal birth position a poor predictor in and of itself. But by combining the ordinal birth position with information about the psychological position, potentially useful material emerges to aid in the diagnostic effort.

To illustrate, the I.T.P.A. is used to examine a young man who is six years, seven months old. He is the third of four children. He has two older brothers, aged eleven and nine, and a younger sister, aged two. The youngster's perception of his place in this array holds significance for the diagnostician in that a useful interpretation may be contingent upon it. If the youngster perceives himself as being disenfranchised from his youngest position by a baby sister, he could be investing a considerable amount of energy revenging his loss on his parents, his brothers and sister, his teacher, his classmates or himself. This can conceivably affect his test performance considerably. On the other hand, he may see himself as lucky to have a little sister and quite fortunate to be the youngest brother with two older brothers to do all the work.

A youngster's perception of his place in the family ultimately narrows to a self-perception. An investigation into this realm holds potentially useful material for the examiner.

Psychological Correlates

Visual perception and discrimination, auditory perception and discrimination, understanding and interpreting concepts, motor and verbal skills are all examples of psychological correlates to the I.T.P.A.

As with the physical and environmental correlates, the psychological factors can also be seen in cause/effect and teleological terms. In the case of auditory discrimination and perception, for example, is the youngster being examined exhibiting neurological deficiency or are there purposeful uses for an inability to auditorily discriminate and perceive in this youngster's world? Knowing either will help to create a more accurate, useful and encouraging diagnosis.

CHAPTER 2

REVIEW OF THE LITERATURE

In this chapter, literature related to the English and Spanish I.T.P.A. is presented. Additionally, studies concerning Mexican American families are examined and literature relative to the people of Baja California and their land will be surveyed.

Literature relevant to the two basic research questions in this study is rare or nonexistent. The Spanish I.T.P.A. is so new that only one article has appeared bearing its name. McCall-Perez (1980) studied the performance of bilingual children living in Southern Arizona on the Spanish I.T.P.A. and found their scores to be, with few exceptions, significantly lower than the established norms.

The Spanish Version of the I.T.P.A. has not to date been used with a rural population. On the other hand, the English Version of the I.T.P.A. is well known and well researched. Investigators have examined different groups of children to determine their responses to the sub-tests of the I.T.P.A. Studies relating to severe reading disabilities (Kass 1966), speech disorders (Ferrier 1966, Foster 1963), mental retardation (McCarthy 1965, Wiseman 1965), Down-syndrome children (Bilovsky and Shore 1965), cerebral palsy (McCarthy 1957, Meyers 1963), and epilepsy (von Isser 1974) have all been conducted. In addition, ethnic groups have been studied by Rickman (1966), Lombardi (1970), and

Garber (1968). Rickman (1966) compared fifty young black children from middle class areas with fifty black children of the same age from lower socioeconomic levels. The black children from middle class homes showed superior abilities on all subtests as compared to black children from lower socioeconomic homes.

In a study of Mexican American children in the Head Start Program in 1979, it was found that the Mexican American children showed a similar profile to black children except in the two sequential memory tests. Mexican American children appeared to be superior in visual sequential memory and black children appeared to be superior in auditory sequential memory (The Impact of Head Start, 1969).

Lombardi (1970) studied the psycholinguistic abilities of Papago Indian children in the first and third grades. He found that the Papago children, with one exception, obtained lower scores on all the subtests when the scores were compared to the standardized norms. Like the Mexican American children, the Papago children were superior in visual sequential memory. Garber (1968) also found a superiority in visual sequential memory in his study of Navajo Indian children.

Kirk (1972) suggests that childhood rearing practices among Native Americans and Mexicans may account for the superiority in visual sequential memory. He theorizes that Mexican and Native American cultures rely more on visual imagery to transmit their cultures than on auditory representation. Kirk also suggests additional research in this area.

The Mexican American Family

The second element of the research involves an inspection of correlates which may be valuable in interpreting the I.T.P.A. and offering diagnostic assistance. Literature using specific correlates with Mexican children is not to be found, but some literature does exist on the Mexican American family. If the correlates can be seen teleanalytically, then research on Mexican American families is relevant.

Birth order is important only for the oldest male, who is prepared by the mother to carry on the dominant role of the father (Penalosa 1968, Staples 1971). Female children are described as over-protected and trained to care for others and the home (DeAvila, 1976).

In the only available study that emphasized birth order in Mexican families, Gabet (1971) compared the achievement scores of first born with second born siblings in Anglo families, Black families and Mexican families. In Anglo families, first born females scored significantly higher than either sex sibling. Mexican female first borns scored significantly higher than male siblings. Black female first borns scored significantly higher than female siblings.

To date, Crowder (1980), in her study of cooperation among the Zapotec Indians of Oaxaca serves as the lone example of a study directly related to Mexican families where teleanalytic principles were employed. Zapotec parenting practices, according to Crowder, are undergirded by three cultural values. They are:

1. Basic equality between the sexes
2. Value given to all work, no matter who performs it
3. Non-separation of generations

Additionally, the study indicates a significant prevalence of cooperative behaviors over disruptive or non-cooperative behaviors occurring in Zapotec families. Crowder attributes some of the Zapotec attitudes about cooperation to their economic base, subsistence farming. Everyone has a task which is necessary for the survival of the group.

Other available literature focuses on the Mexican National Character (Moquin 1970, Rivera 1969, Wagner 1970), which Hernandez (1970) and Cabrera (1972) criticize as providing little new information and serving only to reinforce commonly held stereotypes regarding the pathology of "Machismo."

The People of Baja California

Much of the written material on Baja California takes the form of the travel guide description. Baja is typically depicted as a last frontier, an outpost at the edge of the life zone. Presumably, a place more arid, hot or windswept than Baja California would be beyond the limit of the range of life forms. Many of the descriptions contain a mile by mile running narrative with places of interest, danger or pleasure laced into the drama of the author's personal adventure. One characteristic seems to unify all the accounts: authors writing in English do not go to Baja to see Mexican people. Most go, like Joseph Wood Krutch, to see everything but people. It is true enough that in most accounts there are pictures with people in them; a fisherman

butchering a freshly harpooned sea turtle, or "los vaqueros" driving their cattle into the shallows to be loaded on barges, transferred to ships and taken to market. The captions of the pictures will describe turtle soup, not turtle fishermen, or the cattle industry as a new economic possibility for Baja, but not the vaqueros. Adventurers telling of their various odysseys fraught with more than one life threatening moment seem curiously oblivious to the fact that people make Baja their homes and have done so for centuries.

In A Historical Summary of Baja California, Alexander A. Taylor (1971) discusses the fluctuation of human inhabitants in the Baja. According to Taylor, a census in 1786 recorded 15 different mission districts on the Baja peninsula, within whose boundaries lived 4,000 Indians and 54 Presidio soldiers. Taylor states that in 1802 more than 5,000 Indians and others lived in Baja and that the "barbarous tribes" to the north (Alta or present day California) numbered 4,000 more, making 9,000 in all. In 1842, the Mexican Congress admitted two delegates from the two California's on the basis of 33,439 population, 12,000 of whom were acknowledged as belonging to the peninsula.

It was estimated in 1867 that there were about 26,000 people living in the country from San Diego to San Lucas, about 1,000 of whom were foreigners. No accurate account of the population has ever been published or even ascertained since its foundation; the old Spanish notices up to 1802 were confined to the mission colonies or settlements.

According to Massey (1955), all of the Indian tribes of the peninsula seem to be affiliated with the Yuma's of Colorado and

with the Cora's below LaPaz. Though they were known by many names, roamed the entire length of the peninsula, and probably numbered more than 25,000 in the pre-history of the Baja, today they are gone.

The German Father Johann Jakob Baegert, stationed in Baja California from 1751 to 1768, wrote Observations in Lower California upon his return to Europe. Baegert (1952, p. 5) begins his book this way:

Everything concerning California is of such little importance that it is hardly worth the trouble to take a pen and write about it. Of poor shrubs, useless thorn bushes and bare rocks, of piles of sand without water or wood, of a handful of people who, besides their physical shape and ability to think, have nothing to distinguish them from animals, what shall I or what can I report?

Later, Father Baegert (1952, p.18) goes on to say:

As for the Native inhabitants, they were worse than the land they lived in. Gratitude toward benefactors, respect for superiors, reverence towards parents, friends or relatives, politeness with fellow man are unknown to them, and words for these attributes are not in their language. Laziness, lying and stealing are their three hereditary vices, their three original sins. They never work, never bother about anything except when it is absolutely necessary to still the pangs of hunger. Although I have many means to educate them, together with the seed of the Divine Word, which was preached to them many times, my labor has borne little fruit.

The Italian Father Clavijero, whose history of (lower) California was published 17 years after Father Baegert's account, declared that when the missionaries first arrived in Baja, "not a hut, nor an earthen jar nor an instrument of metal nor a piece of cloth" (Clavijero, 1975, p. 22). The natives did possess fish nets, bows and arrows, darts and lances, but they were unskillful hunters and they

lived principally upon what they could pick up--locusts, lizards, caterpillars, spiders and lice in their hair. According to Clavijero, the women wore a minimum of covering, the men went completely naked and they had no permanent homes. No marriage ceremony was known, they were essentially promiscuous and their religious notions were centered around the practices of very primitive medicine men.

Clavijero complained that they were usually starving, though occasionally gorged, they followed vultures to rob them of their prey, and the only animal they would not eat was a badger because it looked like them. Cannibalism was indeed the only vice they did not seem to cultivate, and some were accused of that.

Despite all of this, Father Baegert felt constrained to add that these depraved creatures were incomparably happier than those who lived in Europe. They seemed to have nothing and yet they had what they needed and as much as they needed of it. Baegert (1952, p. 20) went on to say that they had no grey hair, joked and laughed all the time, and "If only the California natives, who really enjoy this temporal happiness, would also give thought (now that the light of the true faith shines upon them) to the bliss of the other world and the future life, and try to gain it by more Christian conduct." Such were the human souls to whom the missionaries explained the mystery of the trinity and promised salvation through baptism.

How it happened that the aborigines of Baja California remained at a level of culture almost as low as that found anywhere on earth while to the east and to the south a great pre-Columbian civilization

rose to heights which still astonish current day archaeologists, is not known.

The natives of Baja California were primarily hunters and gatherers while across the Gulf, corn, squash and beans were cultivated, and animals domesticated. Hunters and gatherers do not stop long enough to erect monuments and the other trappings of civilization.

It is possible that the type of civilization enjoyed by the native Californians did not resemble European or Aztec civilization, and as such, simply did not fit the definition.

The coming of Europe brought a steady decline to the Indian population of Baja. Father Clavijero suggested that what he called the "depopulation" of the southern villages was the result of epidemics sent by God to punish the natives for their rebelliousness. For whatever reason, smallpox, measles and syphilis claimed thousands, and by 1908 Arthur North, writing in The American Anthropologist claimed that the end of the Baja California Indians was at hand.

As a final note, in 1866 J. Ross Browne was commissioned by the United States government to thoroughly investigate Baja California and evaluate the colonization potential for certain U.S. business interests, most of them being in San Francisco. In his report (Brown 1966), Explorations in Lower California, only a few sentences were given to observations of the people he encountered. The following is excerpted from his log:

The native population have no energy and dislike the intrusion of foreigners. They seem to care for nothing but the simple means of subsistence. Avarice is a sign of civilization. They will do things for hatred but not for money.

La Paz is infested with a characteristic population--half Mexican, half Indian--all lazy and thriftless. They spend their nights gambling and their days sleeping (Browne, 1966, p. 23).

The Mexican population, although good miners, cannot be relied upon for labor. They work cheap but quit upon the most trivial pretexts. American enterprise is looked upon with jealousy by the local authorities and vexatious exactions are constantly made to impede its progress (Browne, 1966, p. 38).

They are unreflecting people who possess no self-control but follow like animals in every respect their natural instincts (Browne, 1966, p. 57).

As a final comment on these native Baja Californians, it may have been an allegiance to their natural instincts which enabled their survival at all. The land is little changed because of them. The missions which were built to impress and amaze them are mostly rubble. Perhaps their only legacy are the notions advanced about them by the missionaries and explorers who saw them through the filtered lenses of their own cultural constructs.

Today the peninsula supports approximately 1,500,000 people. Most are Catholic and most have emigrated from Mexico's mainland. With the exceptions of urban centers like Mexicali, Tijuana, LaPaz and Cabo San Lucas, Baja is primarily rural and agricultural or wilderness. The land itself and the politics of the land have impacted modern Baja Californians considerably. In his book, La Historia de Baja California, Pablo L. Martinez (1956) details the major phases of the Mexican Revolution from 1910 (the fall of Porfirio Diaz) to 1946. This 36 year period, fraught with revolution and counter-revolution, created the economic climate and opportunities for modern Baja California to emerge.

More than any other, the Revolutionary Revival of the Lázaro Cardenas administration (1934-40) provided the people of Baja with the means of development. The major emphasis of the Cardenas administration was on land reform. Cardenas broke up many large estates and distributed the land to ejidos or communal farms. Under his leadership, Mexico again became fervently revolutionary. In 1937 Cardenas regrouped the revolutionary forces into a permanent, formal and virtually unchallenged political party, the PRM (Partido Revolucionario Mexicano), with four sectors--the military, the worker, the peasant and the middle class elements. Cardenas expropriated foreign oil holdings and created a state oil monopoly, Pemex (Petroleos Mexicanos). He also nationalized the railways and vast tracts of land.

Baja, it was soon discovered, had more water and tillable land than had been imagined. Small farms erupted on the landscape and the peninsula started to emerge as a producer. Despite its potential, Baja was still an isolate, without roads and surrounded on three sides by the Pacific Ocean.

Then in the decade of the 1970's during the administration of Luis Echeverria Alvarez, two important developments occurred in Baja. The transpeninsular highway was completed and Baja had a road. A little later, Mexico took delivery of four large ferry boats from Japan and regular service was initiated between Baja and port cities across the gulf.

With tillable land, water pumped from wells, gasoline and diesel fuel to power produce trucks, a road to transport goods, and four oceanic

links to Mexico's mainland, Baja was equipped to contribute significantly to Mexican sufficiency.

Baja California, notwithstanding the four major urban centers, is predominantly an agricultural society. Today, about two-thirds of its export earnings comes from agriculture. Commercial fishing in the Baja is still in an infancy stage.

The distinctive feature of Mexican agrarianism in the Baja is the ejido. This form of rural cooperative, somewhat similar to the Soviet sovkhoz, was an outgrowth of the rural upheaval of the Cardenas period. In the ejido, the arable land is owned not by the state but by ejido members themselves, either as a collective or as individuals with titles to separate land parcels. By 1946 the ejidos were a fixture of Mexican rural life. More than 60 percent of the cropland in Baja belongs to ejidos and over 200,000 Baja Californians live off the earnings of this land.

Octavio Paz, a Mexican poet and intellectual of the 20th century, has chronicled the evolving character of the Mexican people. In The Labyrinth of Solitude, Paz (1980, p. 87) analyzes the revolution and its implications for Mexican people today:

The revolutionary movement, as a search for--and momentary finding of--our own selves, transformed Mexico and made her "other." To be oneself is always to become that other person who is one's real self, that hidden promise or possibility. In one sense, then, the Revolution has created a nation; in another sense, of equal importance, it has extended nationality to races and classes which neither Colonialism nor the nineteenth century were able to incorporate into our national life.

Despite these accomplishments, however, thousands of our rural citizens live in dire misery and other thousands have no recourse but to emigrate to the United States each year as temporary workers.

The Mexican hides behind a variety of masks, but he tears them away during a fiesta or a time of grief or suffering, just as the nation has cast off all the forms that were stifling it. However, we have not yet found a way of reconciling liberty with order, the word with the act, and both with the evidence--not supernatural now, but human--of our fellowship with others. We have retreated now and then in our search, only to advance again with greater determination. And suddenly we have reached the limit: in these few years we have exhausted all the historical forms Europe could provide us. There is nothing left except nakedness and lies. After the general collapse of Faith and Reason, of God and Utopia, none of the intellectual systems, new or old, is capable of alleviating our anguish or calming our fears. We are alone at last, like all men, and like them we live in a world of violence and deception, a world dominated by Don No One. It protects us but also oppresses us, hides us but also disfigures us. If we tear off these masks, if we open ourselves up, if--in brief--we face our own selves, then we can truly begin to live and to think. Nakedness and defenselessness are awaiting us. But there, in that "open" solitude, transcendence is also waiting: the outstretched hands of other solitary beings. For the first time in history, we are contemporaries of all mankind.

Another 20th century writer and philosopher, Joseph Wood Krutch, has written extensively on the Sonoran Desert and Baja California. By his own admission, he roamed the Baja to get away from society, not to study it, but some of his observations relating to the Baja Californians are timely here.

In his book, The Forgotten Peninsula, Krutch (1961) suggests that in many ways the social structure of Baja is the very antithesis of that typically found in the United States. "Here is a society poor rather than rich, spread thin rather than crowded, lagging at the rear

of technology and industrialization instead of leading the way towards greater and greater complexity" (Krutch, 1961, p. 125).

Because of this, according to Krutch, men not only live differently but act, think and feel differently too. Baja is a society of "use up," "make do." Psychological obsolescence, even as an abstract concept, is unknown. With minimal needs hard to satisfy, there is little room for "conspicuous consumption." On a day to day basis, this translates into creative utilitarianism. When some physical object can no longer serve the purpose for which it was intended, there is nearly always something else for which it can be used. A good example is the automobile. When it has been repaired until it can no longer be repaired, it supplies parts for another car not quite so far gone. It can then be planted and used as a chicken coop, a retaining wall, a storage room, or in some cases, an extra sleeping quarter. In this same way, an empty soup can grows an ornamental plant, the bottom of a broken bottle outlines a flower bed, the discarded tire serves as the sole of a sandal.

During the Second World War, John Steinbeck journeyed to the Gulf of California (Sea of Cortez) with his friend Ed Ricketts. The journey is recorded in Log from the Sea of Cortez (Steinbeck, 1951). Their primary purpose was to collect and classify as many marine invertebrates as was possible, but inevitably they encountered some Baja Californians and Steinbeck wrote about them. In one instance Steinbeck describes meeting the great grandchildren of the naturalist Xantus, who lived at Cabo San Lucas in the early 19th century. Steinbeck describes

a passage from Xantus' diary in which Xantus complained that he could find no wooden boxes in which to ship his specimens because the few boxes which turned up were quickly seized and made into furniture.

Perhaps times have not changed too much. Young children still dig up the trash of American campers for tin cans, and in La Paz, the humbler housewives carefully avoid crushing the shells of eggs they eat in order that the shells can be sold for fractions of a cent to merchants who stuff them with confetti and in turn sell them to party goers who have fun breaking them on someone's head. Why waste an eggshell at breakfast when it can be sold unbroken for a profit and then broken for fun!

The Land

Baja California is a peninsula originating along an 85 mile strip bordered by the State of California to the north. It plunges to the south southeast to transfix the Pacific Ocean 1,000 miles later. With the exception of its northern border, Baja California is surrounded by the Pacific Ocean. The littoral to the east fronts on the Gulf of California, sometimes called the Sea of Cortez. To the west, Baja meets the Pacific.

Baja California is divided into two political regions, Baja California norte and Baja California Sur. The division point is the 28th parallel.

With the exception of a coastal plain and mountain range (the San Pedro Martir) to the northwest, Baja is considered geographically to be part of the Sonoran Desert. Two specific regions are usually

designated, the Vizcaino Desert of the north and midriff and the Magdalena Desert of the south. Both desert regions are extremely arid, averaging not more than six inches of rain a year. In some places, rain falls only once in a decade. Despite this apparent lack of water, the deserts support an abundant variety of plant and animal life forms. In some instances, as with the cirio or boojum tree (Idria columnaris), the life forms are found naturally only in Baja California.

This study was conducted in the Vizcaino Desert near the north-south midpoint of the peninsula. The Vizcaino is primarily wilderness. At its northern edge, the town of El Rosario supports perhaps 1,000 people. Near the southern perimeter is found the city of Guerrero Negro with its 5,000 inhabitants. Along the gulf coast, La Bahia de Los Angeles is the only village containing more than 100 people. On the Pacific, the fishing cooperative at Santa Rosalillita is the only village besides Guerrero Negro supporting more than 100 people. The interior between the two coastlines is dotted with small farms and cattle ranches.

The researcher and his family lived at Santa Rosalillita during the course of this study. Santa Rosalillita is officially a "cooperativa" subsidized by the PRI (Partido Revolucionario Institucional), formerly known as the PRM which was mentioned earlier. The inhabitants of Santa Rosalillita are primarily commercial fishermen. Some 50 families live at Santa Rosalillita. The fishermen use dories to harvest seaweed, set lobster traps and gather abalone. There is a small school with one teacher. Children can go through six grades of education with some going on to a secondary boarding school.

CHAPTER 3

THE RESEARCH DESIGN

In this chapter, the research design of this study is explained. Additional information is provided about the sample of children used in this study and the chapter concludes with a description of the procedures in data analysis.

The Design

This study is a descriptive one done in the natural setting. There are two primary parts to the research design, the primary instrument being the Spanish Version of the Illinois Test of Psycholinguistic Ability (von Isser and Kirk, 1980).

To answer the first research question, the I.T.P.A. was administered to 59 school aged rural Mexican youngsters, the null hypothesis being that there will be no difference between the cumulative mean scores of the rural children when they are compared to the cumulative mean scores of the norm groups.

To respond to the second question regarding the use of physical, environmental and psychological correlates, a structured verbal questionnaire was used to gather information. Each child taking the I.T.P.A. was given the questionnaire (Appendix A and Appendix B). The children's responses to the questionnaire are used to offer explanations in regard to the completed test protocols.

In all cases the I.T.P.A. was administered by the researcher. Efforts were made to minimize the possible occurrence of effects due to cultural and observable differences in the author. A discussion of those attempts follows.

The researcher and his family lived in Santa Rosalillita for five months to collect the data for this project. A dwelling in the center of the pueblo was made available for this purpose. The central location allowed the author and his family an avenue of assimilation into the social life of the community. The researcher's two children served as ambassadors at large and after two weeks in residence, friendships with other children in the community were well developed.

Through friendships with Miguel and Jose Carreon and Ermalinda Favela, entrance into the adult community was facilitated. Evening coffees, late night poker games, and small social gatherings served as important mediums of contact and communication for the researcher and his wife. Through such exchanges, a citizen's advisory group and an English class were organized. Additionally, the author was invited to assist with the lobster harvest and on several occasions went to sea with the dorymen of Santa Rosalillita. Opportunities to participate in the daily life of Santa Rosalillita provided the researcher the chance to exchange ideas, make observations and establish friendships with the residents. No attempt to formally collect data for this project occurred during the first six weeks of residence.

Before the testing began, the author convened a citizen's advisory group for the purpose of examining the Spanish Version of the

I.T.P.A. In the course of a week, the test was explained and each item was examined to make sure that words and phrases used in the text were appropriate for the children of Santa Rosalillita. In some cases, slight modifications were made in the exam. These will be addressed in the next chapter. The friends who served in the citizen's advisory group were interested and enthusiastic. They helped to pave the way for the initial testing in Santa Rosalillita by scheduling children and providing information and reassurance to parents who were not yet acquainted with the researcher.

The Sample

Fifty-nine rural Mexican children were tested in this study. Their ages and sample sizes follow: 4 years--N = 8; 5 years--N = 18; 7 years--N = 20; 9 years--N = 13. All of the children lived in Santa Rosalillita. All attended school at Santa Rosalillita, but for many, attendance was sporadic. The average daily attendance at school during the period covered by this study was 30. Additionally, school was held an average of three days a week. Although no individual attendance records were kept by the researcher, it became apparent that some children in Santa Rosalillita rarely attended school. The children in this study were all monolingual Spanish speaking.

Analysis of the Data

Parametric statistical processes assume that random sampling procedures have been observed. The only alternative to random sampling which meets the assumptions of parametric statistics is to measure every member of a population. For this study, every child between the

ages of four and nine living near Santa Rosalillita was tested. While this constitutes the population of Santa Rosalillita, it represents only a sample of rural Mexican children. As a result, caution should be exercised in any attempt to generalize the findings contained herein to other rural Mexican children.

The first research question asks how the scores and test profiles of school aged children living in a rural Mexican environment compare to norm groups on the Spanish Version of the I.T.P.A. A series of t tests, one for each age group (5, 7, 9) were used to examine this question. Since subtests are intercorrelated, the t tests must be made with the cumulative subtest raw scores. Thus, the Spanish I.T.P.A. as an entity is compared, not the subtests. The means of the cumulative raw scores for the rural children used in this study were compared with the means of the cumulative raw scores for children who were tested in Mexico City and Hermosillo. The t tests are two directional calculated at the .01 alpha level of significance.

To address the second research question, information was drawn from the questionnaire and the clinical observations of the author to suggest test interpretation possibilities. Case studies are presented as a way to demonstrate the significance of physical, environmental and psychological correlational data.

CHAPTER 4

FINDINGS AND DISCUSSION

In the proposal for this study, nine research questions were delineated. In an effort to present the data in an understandable and useful manner, these questions will be addressed separately and in order.

The first research question was: How will the scores and test profiles of school aged youngsters, ages four to nine, living in a rural Mexican environment compare to the standardized norms of the Spanish Version of the Illinois Test of Psycholinguistic Ability. The null hypothesis states: There will be no difference between the cumulative mean scores of the rural children when they are compared to the cumulative mean scores of the norm groups.

Table 2 presents the summary data for the comparison between the rural children of Santa Rosalillita and the norm group sample of urban children from Hermosillo, Sonora, Mexico. Table 3 presents the summary data for the comparison between the same sample of children at Santa Rosalillita and the norm group sample of urban children from Mexico City.

It can be seen that comparisons for seven and nine year olds between the two urban populations and the rural children of Santa Rosalillita reveal no significant statistical differences in the overall

Table 2. Analysis of t tests showing a significant difference between the five year old children from Santa Rosalillita and the five year old children from Hermosillo

	Santa Rosalillita			Hermosillo				
	N	\bar{X}	SD	N	\bar{X}	SD	df	t
Five year olds								
Cumulative raw scores	18	109.7	30.51	20	169.55	32.58	37	5.04*
Seven year olds								
Cumulative raw scores	20	206.35	23.70	20	206.65	16.73	39	.046ns
Nine year olds								
Cumulative raw scores	13	259.54	29.92	20	266.70	20.92	32	.751ns

*Significant at .01

Table 3. Analysis of the data showing a significant difference between the rural five year old children from Santa Rosalillita and the urban five year old children from Mexico City

	Santa Rosalillita			Mexico City			df	t
	N	\bar{X}	SD	N	\bar{X}	SD		
Five year olds								
Cumulative raw scores	18	109.17	30.51	20	174.95	33.54	37	5.23*
Seven year olds								
Cumulative raw scores	20	206.35	23.70	20	219.35	23.90	39	1.72ns
Nine year olds								
Cumulative raw scores	13	259.54	29.93	21	244.99	23.13	33	1.49ns

*Significant at .01

test performance. However, the comparison for five year olds between the two urban groups and the children from Santa Rosalillita indicates that a statistically significant difference exists between the rural and urban children.

In 1972, Dr. Samuel A. Kirk published an article in Exceptional Child in which he summarized and speculated upon the studies using the English I.P.T.A. with children from differing ethnic backgrounds. In regard to Mexican American children, he suggested that future studies may show a wide diversity, depending on the cultural or geographic area in which the children are reared. In answering the first question of this study, it seems possible to both validate and neutralize this speculation. When compared with the urban children, one group of rural children, the five year olds, appear to be significantly less capable in their ability to perform on the Spanish I.T.P.A. However, two other groups of Santa Rosalillita children, the seven and nine year olds, appear to portray little difference in their ability to perform on the Spanish I.T.P.A. when they are compared to the samples or urban children.

In the article cited above, Kirk suggests that the "diversity" might depend on the cultural or geographic area in which the children are reared. The researcher observed several cultural variables which might help to explain the differences in test performance by the five year olds.

For the author, the most obvious and possibly the most important variable was the children's lack of schooling. No preschool of any kind exists in Santa Rosalillita. When children reach five years

of age, and sometimes four and one-half, they are enrolled in the first grade. For the children, this means donning a white blouse or shirt with maroon pants or skirt and joining the early morning march up the hill to school, there to sit in rows with the second, third, fourth, fifth and sixth graders and copy words from the chalkboard. The school and its curriculum will be discussed in more detail in question two, but for the five year old first graders, there appeared to be little in the way of instruction, appropriate materials, or encouragement. The Spanish I.T.P.A. asks the young examinee to make visual and auditory associations, and to comprehend what they see and hear. From the author's observations, the four and five year olds from Santa Rosalillita were simply not ready to comprehend and associate according to the test format because they had never been asked to do so before. Eight four year olds were tested in this study and the decision was made to remove the protocols from statistical analysis because the children had great difficulty with the demonstration items; in fact, several could not do them.

In addition to the lack of school experiences relative to the composition of the Spanish I.T.P.A., the five year olds of Santa Rosalillita have little in the way of media or material stimulation which might aid them in attempts to perform on the Spanish I.T.P.A.

Since Santa Rosalillita is not served with electricity, the community is without access to television or commercial radio. The lack of electronic media could conceivably allow more time for reading books or magazines, or even parlow games like Scrabble or Monopoly.

From the author's observations, such was not the case. Books and magazines were rare in Santa Rosalillita. The author encountered Bibles in a few homes, but the only other print material was in the form of comic books with adult soap opera themes. Children's magazines, coloring books or comic books were not observed in any of the homes visited by the researcher. Children's literature is available in San Quintin to the north and in Guerrero Negro to the south. Many of the parents in Santa Rosalillita did not place a high value on education and did not model behaviors which would create an atmosphere of inquiry.

After the children of Santa Rosalillita reach their second birthday, they appear to enter a period of disjunction with their families. This is not meant to imply that they are cast adrift. In fact, the opposite occurs. Children from the age of two until the age of six are the reason that older siblings have a meaningful place in the family. The younger children become people to watch, monitor, and care for. The youngsters are usually put in the charge of an older sister, age eight or older, who becomes responsible for them. Male siblings usually have to wait until their tenth or eleventh birthdays before they are allowed to participate with their fathers in the fishing industry. Male children are rarely given domestic responsibilities, and seem to gladly relinquish any activity centered around the house to their sisters. In using the questionnaire, Appendix A and Appendix B, the author typically asked about the types of chores that were done to contribute to the family. In a number of instances, young male children answered, "I don't do anything; I have sisters."

The hypothesis that a disjunction occurs between children ages two to six and their families can be supported with additional observations. For children ages two to six, there is typically less contact with the parents. Fathers are often at sea or working on their fishing equipment. Mothers may have new babies to care for, cooking and housework to do (laundry is done by hand), or they may work as processors of the abalone harvest. Only after they reach the age of seven or eight do children regain much meaningful contact with the parents, i.e., sharing ideas or participating in adult conversations or activities. At seven or eight years of age, young girls are taught various culinary chores, such as making tortillas, cleaning fish, or doing laundry.

Young children are expected to play and to stay out of trouble. They are usually monitored rather closely in their play by an older sibling. Typically, little boys prefer to play outdoors in games requiring physical exertion. Many preferred a toy gun to any other toy. Little girls usually chose to play in the shade with dolls. The children don't use coloring books or children's stories because they don't have them. When it became common knowledge in the village that the researcher's family had books and crayons, many little girls came to visit and use the materials.

Children ages two to six in Santa Rosalillita are rarely given domestic chores or responsibilities. They are considered to be too young and incapable of taking any meaningful responsibility. Several parents related to the author that life after age seven is filled with the weight of responsibility. Children should not feel this weight until they are older, according to many.

In summary, children between the ages of two and six living in Santa Rosalillita typically share the following conditions:

1. There is little meaningful contact with the parents.
2. They are in the charge of an older sibling who assumes responsibility for them and directs their activities.
3. They are frequently at play but infrequently play with materials which would aid them in school.
4. They are asked to assume few if any responsibilities as ways to contribute to the family.

The combination of these elements has the effect of fostering a type of overprotection. In the author's opinion, the children of Santa Rosalillita ages two to six are often protected from thinking for themselves. As a result, when they are asked to think for themselves, they appear to be incapable. Perhaps they are just unpracticed.

In summary, a five year old child from rural Baja California immigrating to the United States with his family might appear to be so incapable that it may seem appropriate to label the youngster as learning disabled or even mentally retarded. It is hoped that such a label would be the result of an extensive array of diagnostic procedures and not as the result of the administration of a single test or a series of cursory observations.

In contrast to the performance of the five year olds on the Spanish I.T.P.A., the seven and nine year olds appeared to perform at a level consistent with other Mexican children of the same ages. A possible explanation might entail the use of the same set of variables

that was used to discuss the five year olds. In the case of the seven and nine year olds, many of the circumstances within the variables are reversed. The seven and nine year olds are third, fourth and fifth graders who have had some experience with the kinds of tasks posed by tests like the Spanish I.T.P.A. Instead of being in the charge of older siblings, seven and nine year olds are placed in charge of younger children. They are given tasks of responsibility and create a meaningful place for themselves in the family. Instead of being monitored and directed, they acquire some experience in thinking for themselves.

In summary, the seven and nine year olds are given more opportunities to think for themselves and they are generally expected to rely on their own reasoning. As a result, they are generally better prepared to deal with material similar to that encountered on tests like the Spanish I.T.P.A.

While this is an attempt to interpret in general the statistical findings and to address the first research question, it is not meant to imply that all of the children in Santa Rosalillita will fit the explanation. Specific cases of exemplary children will be used to answer question two.

The second research question was: How can supportive correlated information be used to explain and describe the performances of the rural Mexican children on the Spanish I.T.P.A.? To answer this question, the correlates will be partitioned into three categories: physical, environmental, and psychological, and will be addressed separately. Selected case studies will be used to support the author's observations.

The Physical Correlates

The concepts of mixed laterality and poor body image as they are defined in the first chapter of this study were not observed in any of the children who participated in this project.

Nutrition, or the lack of it, is considered a physical correlate and bears mention. The people of Santa Rosalillita typically eat two meals a day. The first meal is eaten between 10:30 and 11:00 a.m. The second usually occurs between 3:00 and 4:00 p.m. The workday starts just before dawn when the ocean is on its gentlest terms. Fishermen drink a cup of coffee before going to sea for the morning.

Since school starts at 7:00 a.m., children are up by 6:30 and are given a drink of hot chocolate. At the age of seven or eight, many of the youngsters start to drink coffee. Granulated white sugar is used in liberal quantities in the chocolate and coffee. School is dismissed from 10:30 to 11:30 a.m. for the main morning meal. Breakfast generally coincides with the reappearance of the fishermen returning from a morning of lobstering.

The author found the breakfast to be fairly consistent throughout the pueblo. Flour tortillas are always served. Beans, potatoes, or rice are usually included. Lobster or abalone, prepared in a wide variety of cakes, stews, casseroles, or by themselves, are served in season. The season for lobster is October through April. Abalone season runs from May until September. Peppers, onions, and garlic are used liberally for seasoning. Coffee is invariably taken with the breakfast meal.

The children return to school between 11:30 and 11:40 a.m. and are in school until 1:30 p.m. As mid-afternoon approaches, preparation

begins for the evening meal. A wider variety of fresh meat is possible in the evening, since the men have returned from fishing and have collected the catch from the traps. At times, lobster or abalone are eaten for both the morning and the evening meals. Often, however, another form of meat is procured for the evening. Bonito, cabrilla (a species of rock bass), sand bass, halibut, corbina, and yellowtail are commonly caught in the waters around Santa Rosalillita. On other occasions, clams or large crabs are prepared. Rabbits, mule deer, ducks, quail and sea turtles are all hunted and eaten when they are available. Beef is reserved for special occasions.

As with the morning meal, beans, potatoes or rice are commonly used. Lettuce and tomatoes are frequently offered with the evening meal. Coffee and tortillas were available with every meal ever observed by the author. In the evening, coffee or soft drinks with cookies are commonly served at the poker games or social gatherings throughout the community.

Illicit drugs, such as marijuana, cocaine, or narcotics, were never observed by the author in Santa Rosalillita. Drugs of choice were caffeine, nicotine, and alcohol. Drinks containing caffeine were very popular in Santa Rosalillita. No statistics or records were kept in regard to consumption, but it is believed that six cups of coffee and two soft drinks a day per adult would not be overstating the case. From the author's informal observations, most adults in Santa Rosalillita smoked tobacco.

Alcohol was popular and enjoyed widespread use in Santa Rosalillita. Beer and Presidente brandy were generally preferred.

The author did not observe any clear symptoms of alcoholism in any citizen of Santa Rosalillita, but on several festival occasions, the community seemed to enter into a group binge with the resultant effect of few boats going to sea the following morning. For the most part, drug use in Santa Rosalillita appeared to be tied to the socializing process. The author observed no incidence of the continued consistent abuse of any drug.

In general, the children of Santa Rosalillita appeared to be well fed. No incidence of malnutrition was observed. Additionally, no child was examined who portrayed dietary irregularities sufficient to place test performance in question.

Chronic diseases such as asthma are commonly associated with concern over school performance. Occasionally a child can gain enough control over a condition like asthma to use it to his advantage. For example, if the youngster perceived a situation as being stressful an asthma attack can create an avoidance mechanism for him.

The most common chronic condition in Santa Rosalillita is called "gripa." Symptoms include respiratory congestion, headache, and lethargy. It is generally attributed to the cool, moist morning air and seems to be more common among adults than children. The author did not observe the condition in chronic form among the children, but on several occasions, the condition was seen in adults who appeared to use the symptoms to advantage. Chronic health conditions which might affect performance on the Spanish I.T.P.A. were not observed in the children who participated in this study at Santa Rosalillita.

Children with impaired and uncorrected vision were not observed by the author during the testing process. One child with a possible auditory defect was observed and will be discussed in a detailed case study later in this chapter.

Environmental Correlates

The school at Santa Rosalillita is a two room brick structure perched on a bluff overlooking the pueblo and the Pacific Ocean. Occasionally both rooms are used for instruction, but more often, all of the children are assembled in one room and the remaining room is used for extra desks and storage.

School begins at 7:00 a.m. on days when it is held. As was mentioned earlier, school was in session an average of three days a week during the author's residence in Santa Rosalillita. The combination of numerous holidays and extended periods of absence by the teacher account for the three day average.

The classroom is conspicuously barren. No bulletin boards or posters decorate the walls. Numbers, letters, maps, color charts, displays, and children's exemplary papers are all absent. There are no magazines. The children sit in rows; the youngest are grouped on the north side of the room and each successive grade moves closer to the windows on the south side. Two text books are employed. An arithmetic book which includes fractions, percentages and decimals is used as well as a book of readings with selected social themes. First and second graders do not use the books, but instead are asked to copy words and numbers from the chalkboard. A typical day begins with raising the

flag, sweeping the classroom, raking the dirt around the school, and cleaning the chalkboard. Different children are assigned to these tasks. Between 7:45 and 8:15, the teacher takes roll and makes general announcements. This is followed by arithmetic exercises, which last about one hour. The children are then instructed in printing, writing, or grammar. At about 10:15 the children prepare to go home for the morning meal. They return to school by 11:40 and do exercises in the social readings textbook, which lasts about an hour. Between 12:40 and 1:30, the children do physical activities like volleyball, soccer, or softball. Occasionally they make gifts for parents with plaster or create designs with colored paper and scissors.

The children are taught by a single teacher. There are no classroom aides. It is not uncommon for 30 children, ages five through twelve, to be in attendance. As a result, the teacher spends much of her day organizing appropriate tasks for the various age levels of children. Her attention is typically directed to children who appear to possess proportionately more skill at drawing attention to themselves, with the result that some children get very little individual assistance. Children who become noisy, disruptive, or are continually out of their seats are usually reprimanded verbally. Competition seemed to exist in the classroom between certain ambitious youngsters who had perfected various techniques for occupying the teacher's time. As a result, the room appeared to be noisy much of the day.

In Baja California, a college education is not required to enter the teaching profession. The teacher at Santa Rosalillita had

graduated from Secondary School, which is the equivalent of an American high school, but she had no college training or background in specific areas of educational methodology. She reportedly had been a capable student academically, but she appeared at times to be unaware of the motivation to sabotage the classroom organization generated by several of her youngsters. She seemed to be victimized and frustrated much of the time. In general, the children reported a liking for her, and compared her favorably to previous teachers.

In summary, school was not averse to most of the youngsters in Santa Rosalillita. School provided them with something to do and a place to be with their friends. Due to the lack of materials and methods, a number of opportunities went unrealized in subject areas like science, social science, reading, art, and health. Additionally, opportunities for individual exploration through activities such as learning centers are seen by the author as unlikely, because they don't exist yet as ideas. Abundant opportunities existed for programs in cross age tutoring or small group task work, but these again are ideas whose time has apparently not come in Santa Rosalillita.

The pueblo of Santa Rosalillita is new by most standards. Unlike cities to the south like Mulege, Loreto and LaPaz, which have existed for centuries, the beach at Santa Rosalillita was wilderness prior to 1955. Even then, it served only as a transient fish camp. No permanent settlement occurred there until 1965, and the fishing cooperativa which dominates the economy was not organized until 1970. With lobster and abalone in abundance, young fishermen with young wives

were willing to endure the hardships of the Vizcaino wilderness in exchange for money. Typically, these pioneers left older and more established family members behind in cities like San Quintin, Ensenada, and Colonet. The result is that Santa Rosalillita is full of young families with young children, but few grandparents. Extended families are relatively common in other parts of Mexico, but not in Santa Rosalillita. From the author's viewpoint, the lack of grandparents seems to impact the two to five year old children most critically. For this group, there is no lap to sit on and no stories. Relationships with adults and their ideas may be totally lacking for many of the young children. The lack of such relationships may affect the patterns of association and cognitive readiness of the two to five year old group. Subsequently, the five year olds' readiness for school and related activities may be affected as well.

The order of one's birth may have an important effect on an individual's effort to organize and perceive his world. The following case study is an attempt to demonstrate how a birth order position might influence a youngster's performance on the I.T.P.A. Figure 1 shows the test profile of eight year old Victor.

Victor is the second of four children. He has an older brother age eleven and a younger brother age six. He also has a younger sister who is eighteen months. His father is a fisherman and his mother is a housewife. Victor's older brother is studious and appears to achieve well academically. The six year old brother is verbal, charming, and mischievous. Victor is a quiet leader of the eight year old pueblo

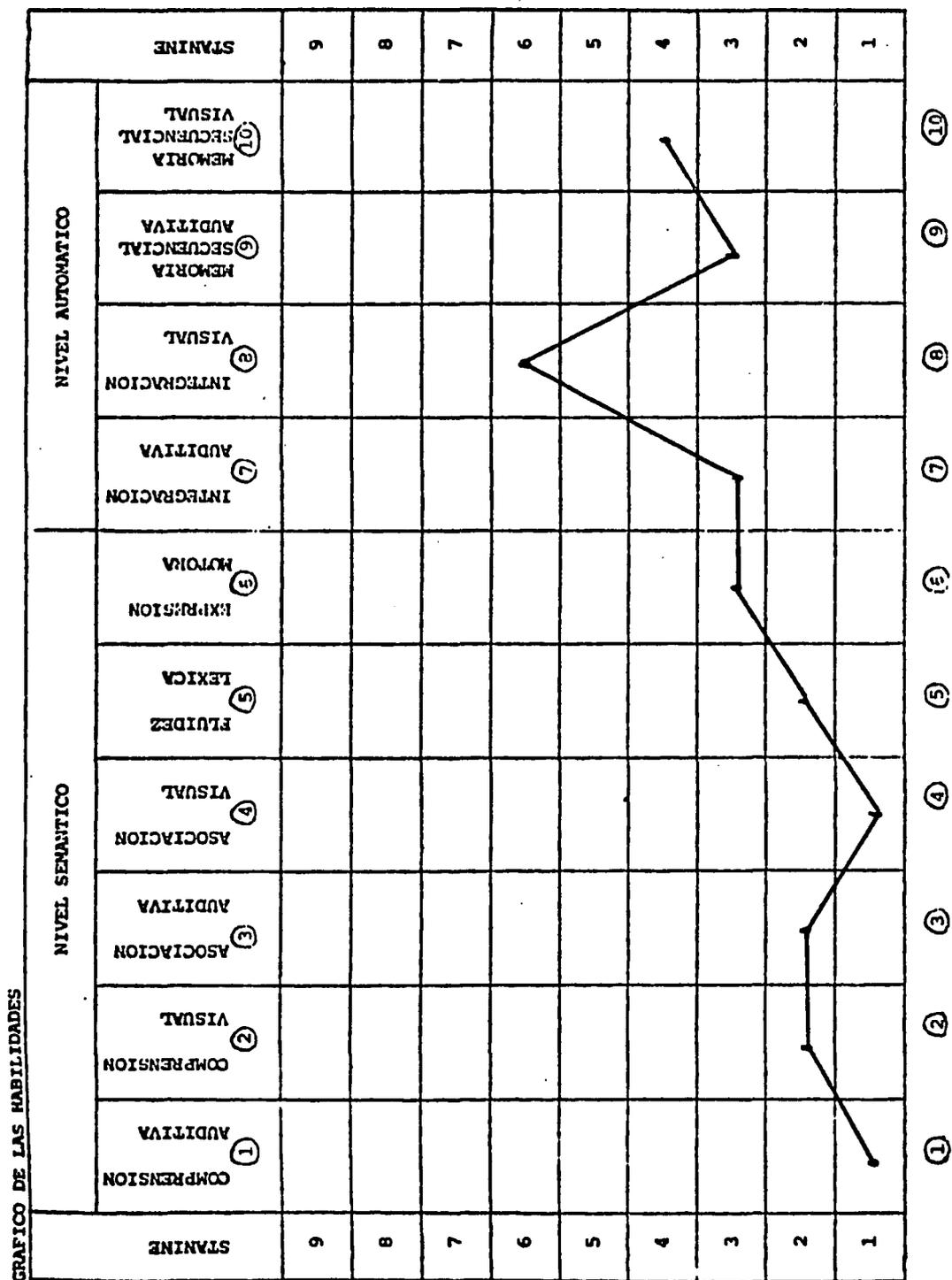


Figure 1. Profile of a child demonstrating the influence of birth order position

boys. It can be seen in the test profile that Victor's scores are generally depressed. There is no obvious pattern of strength and weakness among the channels and processes. Victor scored in the 6th stanine on the subtest Integracion Visual. This is a high score in comparison to the other scores.

In observing Victor at play with his friends, the author was able to delineate some of the characteristics about Victor that create his leadership role. He is not forceful, and he is not especially energetic. He does not often offer ideas or plans of action, but he does see things that others do not seem to see. With this tool he has gained the admiration and respect of his comrades. To illustrate, when Victor and his friends go on forays into the dunes to search for American trash, it is Victor who usually finds the used flashlight batteries, which are then distributed among the friends and used for tops. On other expeditions, Victor has found pocket knives, fish hooks, lures, and toy cars. Not only does he find things that the others do not, but he willingly shares his treasures with his friends.

In the subtest Integracion Visual, the children are asked to find things. A series of strips are presented to the child, each strip containing a number of objects for which the child is asked to look. For example, one strip may contain 15 dogs, some of which are only partially visible. The examinee must, in 15 seconds, point to as many dogs as he can find. The ability to visually close on an object and the ability to differentiate a figure from a background are both tapped in this subtest. After testing and observing Victor, the author realized

that Victor's strongest subtest score was also the substance of his contribution to his social group.

The explanation of the other subtest scores might be found in Victor's social sphere as well. If it is possible to see the world as Victor might see it, life might look discouraging. With an academically oriented older brother who has proven his ability at school, and a highly verbal younger brother who seems to be entertaining even when he's creating mischief, Victor may see himself as operating in a vacuum. He has, from his point of view, few opportunities to acquire significance and to belong. He does not trust his ability to think, because he never seems to think as well as his older brother. Additionally, his younger brother always seems able to create more attention by talking and entertaining. Victor sees his alternative as being quiet. By being quiet and slow, by comparison, he creates a role for himself. He is an object of concern for his parents and teacher, but his friends like him as he is. Victor seems to have some good reasons to be quiet and slow. If Victor gains from this behavior, might he also pay a price? If he does not learn to trust his ability to think, will he ever think independently? Will he always be in someone else's shadow, or can he be encouraged to make his own shadow? One way to encourage Victor might be to create a cross age tutoring program. By helping younger children, Victor might acquire confidence in his ability to think as well as to help others.

Birth order and psychological position are interrelated. The numerical order of birth does not, in itself, seem to offer clear

predictability in the explanation of behavior. Birth order does seem to be a logical place to begin to look at an individual's attempts to cognitively organize his life. By being born in a particular numerical position, an individual may begin to choose his perceptual field as a result of the interrelationships he experiences in that position. His choices and resultant behavior may fit patterns which are commonly seen in others who have experienced similar circumstances. The person may move in the direction of an identifiable role, his behavior becoming more pattern-like and predictable.

The following case study demonstrates the possible effects that discouragement, generated by a psychological role, can have on a youngster who is attempting the I.T.P.A. (Figure 2).

Manuel is an eight year old youngster who was sent from Mexicali to live with his aunt and uncle in Santa Rosalillita. Mexicali is the capitol of Baja California and is not rural; however, Manuel was tested and used in this study because he had been to school only sporadically in Mexicali, and he had been living in Santa Rosalillita for a year.

Manuel is the youngest of eleven children. His father is dead, and his mother is blind. Manuel was reportedly a child of the streets in Mexicali. Often, he would be away from home for more than three days at a time. His mother, in desperation, asked her sister to take Manuel to Santa Rosalillita, where he could go to school and where he would be watched. Manuel's aunt and uncle are childless.

It can be seen from Manuel's I.T.P.A. profile that, with the exception of two subtest scores, Manuel portrays very low performance.

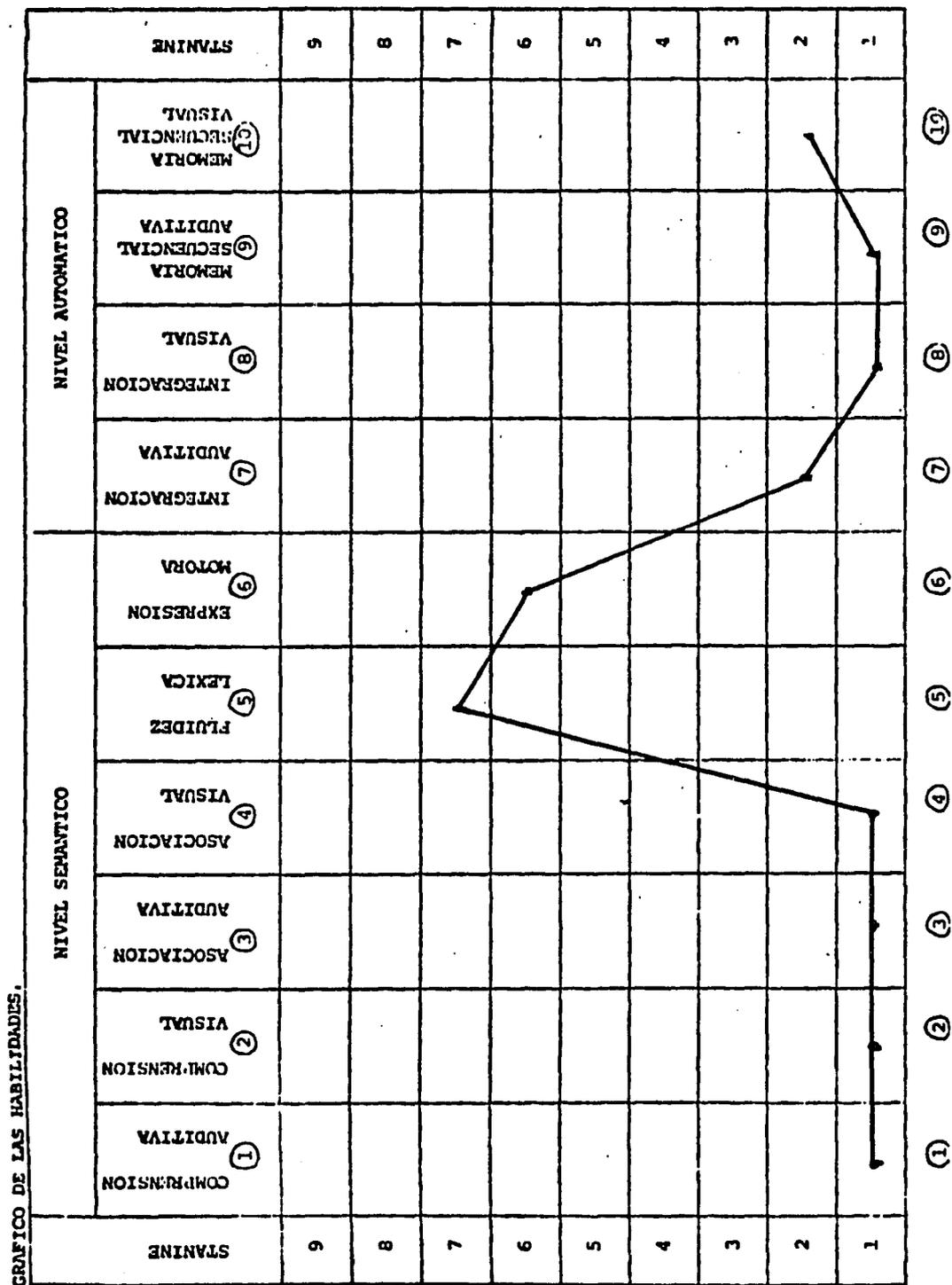


Figure 2. Profile of a child demonstrating the influence of psychological position

Although Manuel appears to demonstrate low cognitive ability, the researcher suggests that it is more a demonstration of discouragement than of mental deficiency.

Manuel is a bright eyed entertainer. He sings, dances, and performs for any audience. At such times, it is hard to see him as a low achiever. Manuel survived in Mexicali by singing and dancing. It is possible to envision a youngster singing and dancing in the streets and bars of Mexicali and making a decent living. In Santa Rosalillita, however, the singing and dancing did not generate the same payoff. Manuel reportedly was laughed at by the adults and then ignored. He was ostracized by the children in the village, who did not accept such antics. When he went to school, he was put in the first grade with the five year olds. He could not play soccer and softball, he was afraid of the dark, and he couldn't spin a top. Some of the children threw rocks at him, and he acquired the nickname of "Burro" from his aunt.

From Manuel's point of view, it might have seemed impossible to gain acceptance in any way but the way that was already paved for him. He started to use his singing ability in school. He would burst into full voice and be promptly throttled by the teacher. He became destructive, and was thrashed. At one point, the author asked him why he had purposely broken a fence down, and he said, "I am a burro." The label of stupidity which the pueblo thrust upon Manuel seemed to create license for him. His rage became calculating. He spilled, broke, or scratched things at moments when this would generate intense reactions. Manuel's behavior and Santa Rosalillita's tolerance seemed to reach a vertex at Christmas time, and Manuel was returned to Mexicali.

When Manuel was given a chance to charm and entertain, he had no equal in Santa Rosalillita. This is demonstrated by his high scores in Fluidex Lexica and Expresion Motora. Both of these subtests require expression and some degree of animation. When he is asked to process or associate material cognitively, Manuel might remember that he is a burro, an eight year old first grader. In this way, he gives himself permission not to try, and not to fail.

From the author's viewpoint, Manuel can be encouraged by denying his permit to license. Being a "burro" can no longer be seen as an excuse to disrupt or to destroy. If he is treated "as if" he is capable, then he might have less reason to be incapable. Specifically, Manuel could contribute by:

1. Teaching the other children songs
2. Teaching the other children to dance
3. Taking part in a play or presentation
4. Teaching younger children to read, write, or do arithmetic

The other children could be encouraged to make a place for Manuel and to become aware of his strengths. Manuel in turn could be asked to look for strengths in other children. Eventually, Manuel might learn that he does not have to be the center of attention to be worthwhile.

Psychological Correlates

The author did not observe youngsters in Santa Rosalillita with visual perception problems. There was no evidence of figure reversal in the Memoria Secuencial Visomotora subtest, nor was there conspicuous

difficulty with object recognition or spatial relations. Most of the children were able to identify a high percentage of items in the Integracion Visual subtest, indicating consistency in figure ground recognition and visual closure.

Additionally, the author did not encounter children who appeared to be neurologically mentally deficient. Children who performed poorly on the test were observed in school, at play, and in community activities. Evidence of consistent delay in understanding or interpreting concepts was not forthcoming in the children. Children who appeared to have difficulty expressing themselves motorically or verbally on the test were observed in other situations and with other people. Since no clues became evident in regard to pattern consistency in motor or verbal function, the author believes that a high percentage of the unresponsiveness can be attributed to inhibition and shyness.

One youngster was tested whose profile indicates a possible problem in auditory perception. The profile appears in Figure 3. Ricardo is a seven year old who is the fourth of six children. He has two older sisters, ages twelve and ten, and an older brother who is nine. He also has a younger brother, age four, and a younger sister who is two. The father works as a fisherman, the family operates a soft drink and candy concession in the parlor of their home. It can be seen from the test profile of Ricardo that his performance in all the tested phases of auditory functioning are sharply depressed, with the exceptions of Fluidex Lexica and Expresion Motora.

It can be suggested from this profile that Ricardo possesses an auditory processing disability. His scores at the automatic level of

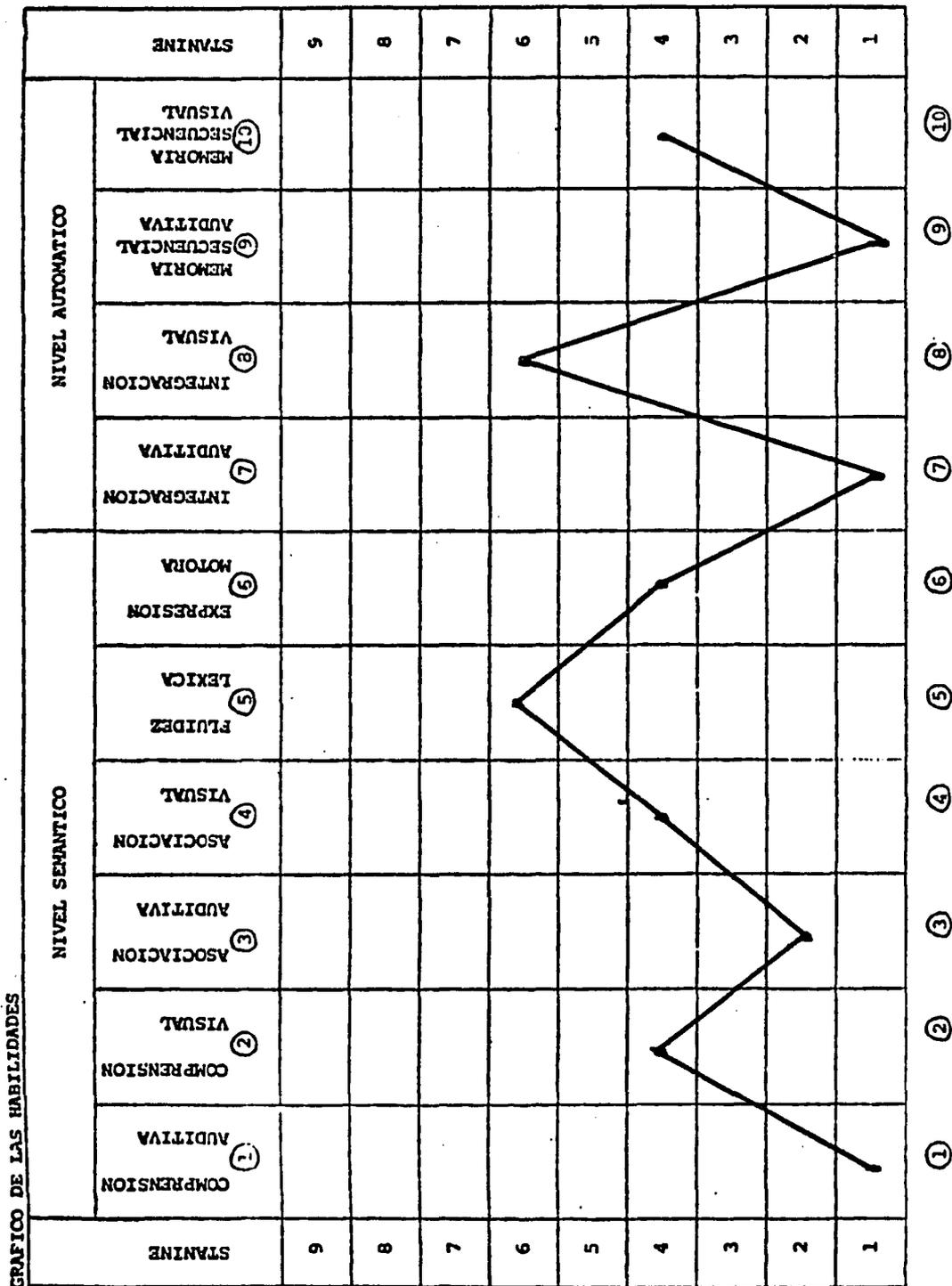


Figure 3. Profile of a child demonstrating the influence of an auditory processing disability

functioning in the auditory channel, Integracion Auditiva and Memoria Secuencial Auditiva, are both at the first stanine. Additionally, some of his scores at the representational level in the auditory channel, Comprension Auditiva and Asociacion Auditiva are depressed. From this, several questions can be advanced:

1. Does this profile reflect the possibility of organicity? Might Ricardo's hearing be neurologically impaired?
2. Does the profile possibly reflect some element of auditory disability unique to intracerebral processes, i.e., the auditory signal is received but becomes delayed or scrambled as it proceeds into the brain?
3. Is it possible that Ricardo uses the auditory processes that were examined less, and as a result, appears to have a disability when he more closely demonstrates the lack of appropriate experience?
4. Could Ricardo be using the lack of auditory capability to provide a place for himself in his immediate social sphere?

The answer to all of these questions is, "Yes." The profile must be inspected in more detail, and other observations of Ricardo must be examined to generate a clearer picture.

Concerning the first question, it is unlikely that Ricardo is hearing impaired. His performance in Fluidez Lexica, a verbal exercise, and in Expresion Motora indicate that he can hear, comprehend, and associate appropriate movement. Nevertheless, in this case the author

would recommend testing by a trained audiologist to create more certainty.

In regard to the second question, it is possible that Ricardo experiences some blockage when he is asked to comprehend a passage or to associate a verbal analogy. It may be as a result of his inability to blend sounds or his inability to remember verbal sequences. A useful remediation program might consist of asking Ricardo to read stories to younger children and to fashion his own questions to ask other children about the story. This would allow him to make a contribution to someone else and possibly become more confident with his own ability. His parents, siblings, and his teacher might be asked to create verbal analogies for him to respond to. In this way, he might develop confidence with auditory associations.

The third question addresses the possible lack of appropriate experience in the auditory channel. From the author's observations of Ricardo at home and at play, Ricardo does not need to remember or associate very much auditorily. He does not need to because his older sisters assume responsibility for him. He is not often asked to remember things, nor is he frequently asked to make auditory associations. He is sometimes asked to comprehend instructions, but not stories. He seems to be capable of doing what is asked of him, but not much is asked of him. In contrast, he demonstrates skill with word use and motor expression because these are important elements of his play. When Ricardo was interviewed, he was asked how he helped around the house. He said that he helped, but he didn't know specifically how.

Additionally, he did not know how his family had fun; he did not know what he wanted to do when he became an adult; he could not remember an early recollection. He described himself as, "A boy." Then he added, "who likes to play." He reported that he likes school, and that he likes to write. He is disciplined by his oldest sister, who tells him what to do. The author asked if he always did what his sister told him to do. With a smile creeping over his face, he answered, "No."

The fourth question asks whether Ricardo might be using the lack of auditory capability to establish a role for himself. When Ricardo indicated that he did not always obey his sister's instructions, the researcher asked, "What happens when you decide not to obey?" "She yells and sometimes tries to hit me," answered Ricardo. The researcher followed with, "And what happens then?" "I run away and sometimes throw rocks at her," came the reply. The researcher continued, "Is it sometimes fun to see your sister yell and make her chase you?" "Claro." (Sure.) said Ricardo, laughing.

From this conversation and others with Ricardo, it became evident that Ricardo understood verbal instructions well enough to ignore them, which created a role and an advantage for him. By being the one who did not understand, he could make his sister yell and chase him, which provided him with attention and control over a sister who was supposed to control him.

In summary, Ricardo can be seen from several positions. He can be viewed as possessing an auditory channel disability. He can be seen as lacking appropriate experience in specific auditory functions, and

he can be observed to use the lack of auditory capability purposefully and to his advantage.

From any of these positions, the following remediation procedures can be offered to help Ricardo:

1. Create responsibilities for Ricardo at home and in school where he must remember verbal instructions. The task should be such that Ricardo can see that he makes a positive contribution with its completion.
2. Create a tutoring role for Ricardo where he gives verbal analogies to younger children and reads them stories.
3. Put Ricardo in charge of leading younger children in a group task.
4. Ask Ricardo to read some of his writing assignments aloud.

By creating meaningful ways that Ricardo can contribute through use of his verbal and auditory skills, avenues are opened for Ricardo to place more faith in his ability and less faith in his need to be disabled.

The third research question was: Is the Spanish Version of the I.T.P.A. appropriate for use with rural Mexican children immigrating to the United States? From the author's observations of the rural children living in Santa Rosalillita, the answer depends on several qualifications, the first and foremost being the age of the child.

As was mentioned earlier, eight four year old children were examined as part of this study. Without exception, the youngsters were unable to complete enough of the test to provide meaningful information

about their cognitive functioning or psycholinguistic abilities. None of the four year old children had ever attended school of any kind. Although a sample of eight is not large, the consistency of the performances in this instance leads the author to suggest caution in the use of the Spanish I.T.P.A. with rural three or four year olds.

In the first research question, a sample of 18 five year olds from Santa Rosalillita was compared to 20 five year olds from Mexico City and 20 five year olds from Hermosillo. Statistically, the children from rural Santa Rosalillita appear to represent a population of five year olds which differs significantly from the sample of urban children from Hermosillo and Mexico City. Although the statistical analysis of the five year old samples was persuasive, the author does not wish to imply that statistical significance equates to proof. Eighteen five year old children is not a large enough sample to provide secure conclusions. Nevertheless, the author suggests the exercise of caution when using the Spanish I.T.P.A. with rural five year old Mexican children. The typical rural five year old profile may appear to be depressed throughout the range of subtests, giving the impression of general mental deficiency. Figure 4 represents a typical five year old profile obtained at Santa Rosalillita.

Allowing for the possibility that a youngster who performs similarly to the profile in Figure 4 is not mentally deficient but simply lacks school related experience and information, the examiner is urged to obtain some related information.

Questions posed to the parents and the child regarding any former school experiences can yield useful information. Additionally,

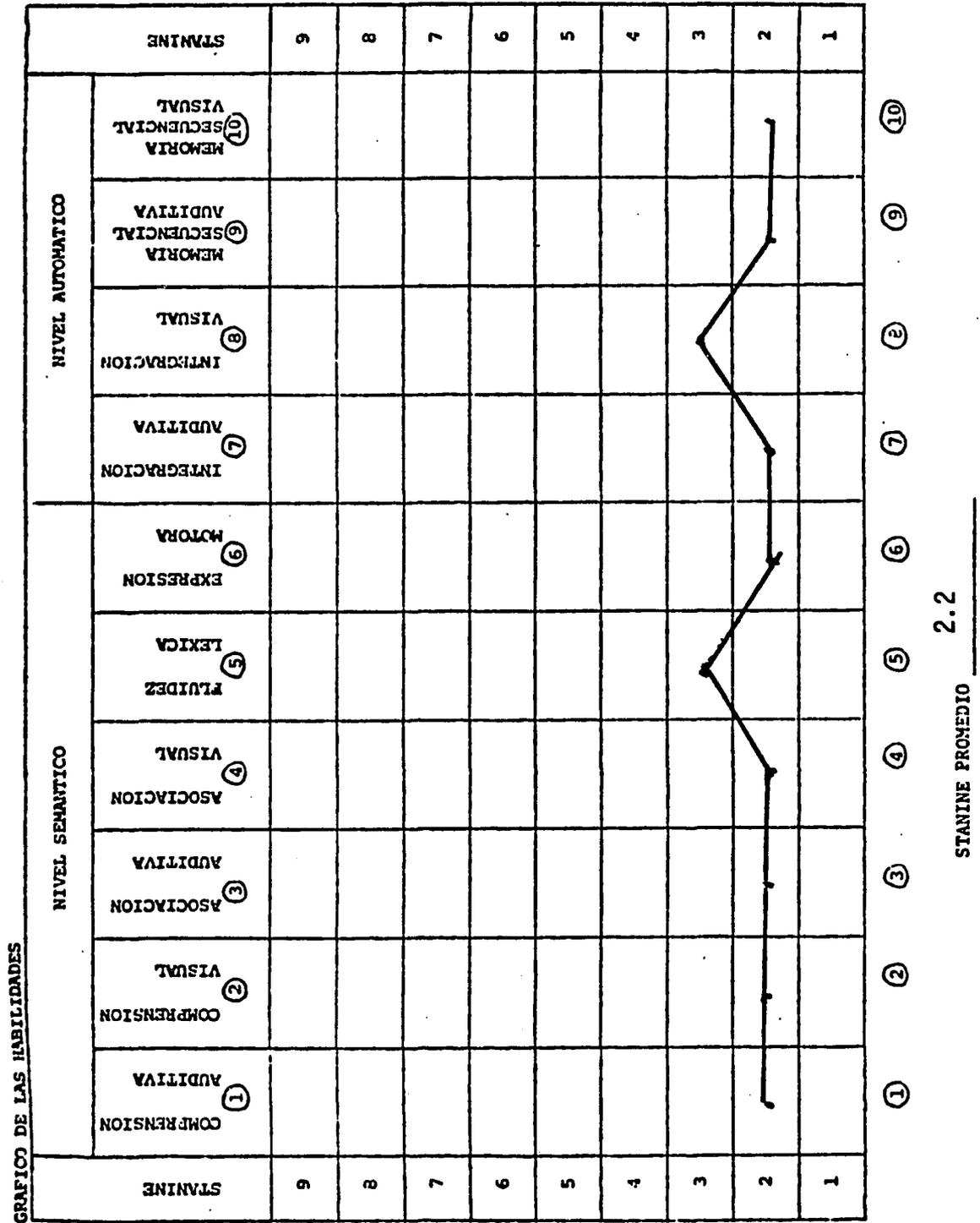


Figure 4. Profile of the typical five year old tested at Santa Rosalillita

questions about the child's birth order in the family, his relationship with siblings, and his psychological position among family members can provide clues to motivation, self-image, and the child's use of strengths and weaknesses.

In summary, the Spanish I.T.P.A. can be used with three, four, or five year old rural Mexican children, but the examiner is strongly urged to obtain as much relative information as possible in addition to the test scores before offering a diagnostic prescription.

The Spanish I.T.P.A. attempts to isolate specific processing skills uncontaminated by other functions. From the observations of rural Mexican children made by the author, the chances of discovering detectable differences in processing strengths and weaknesses increase with the age of the child and with the amount of schooling he has experienced. As was shown in Figure 4, the typical profile of five year old Santa Rosalillita children is depressed and flat. Delineation of processing skills is minimal.

In contrast to the five year olds, the six, seven, eight and nine year olds appear to perform at about the same level as the urban norm groups. While no typical profile can be portrayed for the children aged six to nine years, the chances of obtaining detectable differences in processing strengths and weaknesses are improved.

In summary, it appears that the Spanish I.T.P.A. can be appropriately used with rural Mexican children aged six to nine years. However, it is strongly suggested that the Spanish I.T.P.A. serve as one of several assessment tools and never as the sole instrument in the diagnostic function.

The fourth research question asked: What are some of the educational needs of rural Mexican children as demonstrated by their scores on the I.T.P.A.? The five year old children of Santa Rosalillita demonstrated a general lack of ability in Spanish I.T.P.A. performance terms. In part, this has been accounted for by the lack of school related experiences that five year olds have had. The older children, aged six to nine, appeared to demonstrate a level of performance consistent with the urban children used in the norm group samples. An examination of the individual subtest scores for the groups of children reveals five subtest scores which appear to be most troublesome for the children of Santa Rosalillita. Table 4 portrays these subtests with the mean raw score and corresponding stanine for the three age groups of children tested in Santa Rosalillita.

Table 4. Subtests which were the most troublesome for the children of Santa Rosalillita with raw score means and stanines

	Age 5		Age 7		Age 9	
	RS	Stanine	RS	Stanine	RS	Stanine
Asociacion Visual	4.8	2	14	3	16.3	3
Asociacion Auditiva	6.7	2	20.8	3	32.8	5
Comprension Visual	6.3	2	12.7	3	17.3	3
Comprension Auditiva	4.4	2	13	2	17.1	2
Memoria Secuencial Auditiva	3.5	2	7	3	10.4	5

In the subtests *Asociacion Visual* and *Asociacion Auditiva*, the children are asked to make visual and auditory analogies, i.e., to find similarities in presented concepts. In *Comprension Visual*, the children are asked to find similarities in the use, function, or appearance of objects, another form of analogy. In *Comprension Auditiva*, examinees are asked to listen to a story and answer questions about it to demonstrate their understanding. In the subtest *Memoria Secuencial Auditiva*, the youngsters are asked to repeat a series of numbers presented at intervals of .5 seconds. The series of numbers is lengthened in gradual increments with corresponding correct responses by the youngster.

From the data presented in Table 4, it is possible to suggest some specific activities which address in practical terms the theoretical composition of the subtests. Before proceeding with specific subtest recommendations, one observation seems appropriate. The author observed a lack of educational methodology in Santa Rosalillita, which allowed for the translation of concepts learned in school to application in the youngster's immediate environment. In general, the children of Santa Rosalillita demonstrated little understanding of the composition or workings of the land or marine environments which surround them. With this awareness, it is possible to suggest specific activities which align themselves with the conceptual format of the subtests and also potentially provide for a greater understanding of the Vizcaino Desert and La Bahia de Sebastian Vizcaino, the marine environment which the people of Santa Rosalillita depend on for their economic security. The subtests with suggested educational applications follow.

1. Asociación Visual--By comparing and finding similarities in objects used by the people of Santa Rosalillita, or in objects found in the natural environment around Santa Rosalillita, students might learn to visualize similarity in purpose or function. Objects such as tools used in fishing, cooking, repair of autos and boats, in hunting and washing clothes, might be appropriate. Comparing types of animals, carnivores to herbivores, for example, or comparing types of foods, carbohydrates to proteins, etc., might also be useful in creating an understanding of function and purpose.

2. Asociación Auditiva--The ability to associate an underlying concept which is received auditorily is the key in this instance. Verbal comparisons between physical phenomena might be a useful way to create new associations for the students. For example, a five year old might be able to comprehend associations like, "Whales are big, lizards are small," or, "The ocean is water, the sky is air." For an eight year old, the examples might be, "The ocean is liquid, the sky is gas," or, "Whales are mammals, lizards are reptiles." By supplying the students with writing, drawing, or coloring materials, children can create their own analogies and share them with others, thus teaching themselves as they teach others. Concepts of big and small, up and down, full or empty, can be taught with felt boards, posters, or in-class demonstrations.

3. Comprensión Visual--In this subtest, the youngster is asked to look at an object and then find one similar to it on a separate sheet containing several choices. Matching exercises might be a useful method

to aid children's visual comprehension. Making collections of shells, rocks, seeds, insects, or seaweed can create an understanding of similarities and differences in size, shape, function and purpose.

4. Comprensión Auditiva--This subtest is given as a story cut into three segments. Children are asked to respond to questions to demonstrate their comprehension of what they heard. Few if any children are read to in Santa Rosalillita. From the author's observations in school and home settings, stories are read or told to Santa Rosalillita children very infrequently. As a result, many of the children are ill at ease with this activity. This trend could possibly be redirected by creating a story time and asking the children to either listen or share a short story. These stories could deal with specific themes relevant to the community, the environment, or the legends of Baja California. Children might be asked to keep a journal or to write short stories.

While the suggested activities mentioned above might appear to be common exercises in many American elementary classrooms, none of them were ever observed in operation by the author during his residence in Santa Rosalillita. What might be common place to children in American schools might take the form of a remedial exercise for the rural Mexican child.

5. Memoria Secuencial Auditiva--From the author's observations, the children of Santa Rosalillita are not exposed to numbered sequences, nor are they likely to make use of a skill which enables the short term memorization of digits. No one in Santa Rosalillita is asked to memorize social security numbers, phone numbers, numbered addresses, zip

codes, or account numbers. These things do not exist in Santa Rosalillita. Children might be interested in remembering the price of a retail item which, in Mexican pesos, can easily run into five or six digits. Otherwise, there is little need to discipline oneself to short term numerical memory tasks.

A child from rural Baja California immigrating to the United States may encounter some difficulty remembering large numbers, but regular practice with a numerical address or phone number may provide useful and practical exercise.

6. Memoria Secuencial Visomotora--According to Kirk (1972) and others, Mexican American and Native American children appeared to perform in a superior fashion on this subtest when the profiles were compared to other samples. Actually, Kirk and his colleagues were reporting on data obtained through the use of the English I.T.P.A., the subtest being Visual Sequential Memory. Though they bear the same title, the English version of the Visual Sequential Memory subtest is different than the corresponding Spanish adaptation subtest. As a result, comparisons cannot be reliably drawn. Nevertheless, the rural Mexican children tested in this study did not appear to possess superior ability in Memoria Secuencial Visomotora, as evidenced by the collective raw score means and corresponding stanines for this subtest.

The fifth research question was: Are there specific items in the Spanish I.T.P.A. which are not appropriate for use with rural Mexican children? The answer to this question is no, based on the author's observations during 59 test administrations and conclusions

drawn by the adult citizens of Santa Rosalillita who reviewed the test. There are some items which merit discussion in relation to this question due to their potential usefulness by prospective examiners using the Spanish I.T.P.A.

Of the 59 children tested, only five knew their birthdates. This situation was totally unexpected by the author, who was even more surprised to learn that most parents did not know the children's birthdates either. This could be a serious problem on standardized tests like the Wechsler, which asks for a specific birthdate and uses the information to establish precise mental age scores. The Spanish I.T.P.A. scaled scores are computed in eleven month increments. Most of the children from Santa Rosalillita knew the time of the year or season in which they were born, and all of the children knew how old they were in years. Since the Spanish I.T.P.A. scaled scores are displayed in eleven month increments, it is relatively easy to place a youngster in the appropriate age category.

Several subtests contained items which bear mention. These items were either consistently difficult for the children of Santa Rosalillita, or some part of the item was confusing to many of the children. The subtests will be subsequently listed and the specific items discussed.

Asociación Visual

Item 9. The children are asked to choose one of four objects which goes best with a spool of thread. The choices are a safety pin, a hat pin, a sewing needle, and a thimble. The correct choice is the sewing needle, but many children picked the thimble, which is also associated with a spool of thread.

Demonstration 11 A. The child is shown a picture of a pair of human legs with feet, a soccer ball, and a basketball. The examiner says, "If this goes with this," pointing to the legs and then to the soccer ball, "Then what goes with this?" pointing to the basketball. "Which one of these?" The child is shown four pictures, a pair of hands, a baseball bat, a pencil, and a dish. The logic is, if legs and feet go with a soccer ball, then the pair of hands would go with the basketball. However, many children see the basketball as a softball and associate the bat instead of the pair of hands. Since softball is a common and popular activity in Santa Rosalillita, and basketball is not played at all, the association of bat and ball makes more sense to the children.

Item 19. The child is directed to look at three pictures, a rabbit, a turtle, and a bicycle. Pointing to the rabbit, the examiner says, "If this goes with this," pointing to the turtle, "Then what goes with this?" pointing to the bicycle. "Which of these?" The child is shown four pictures, a four-cylinder gasoline engine, an automobile, a horse, and an antique, horse drawn cart without horse.

The children did not know the story of the tortoise and the hare, and therefore did not necessarily associate a quick animal with a slow one. Desert tortoises are not found in the Vizcaino Desert, but sea turtles, though rare, are occasionally speared by the fishermen. Sea turtles are considered a delicacy in Mexico, and rabbits are eaten on occasion also. Most of the children appeared to be confused by this item because they did not understand the analogy. Most of them appeared to guess, and the automobile, the horse, and the cart were the preferred choices.

Demonstration A. The examiner says, "Los pescados van por el agua. Los pajaros van por _____." (The fish go in the water. The birds go in the _____.) The correct response is aire (air).

Being a marine environment, Santa Rosalillita is home to a variety of sea and shore birds. Many of these birds, like cormorants, pelicans, and pipstrels, are diving birds. They spend a lot of time on or under the water. Many of the children appeared to be confused by this demonstration, as they did not necessarily associate a bird with the air.

Item 2. The examiner says, "Las orejas son para oir. Los ojos son para _____." (Ears are to hear. Eyes are to _____.)

The Santa Rosalillita citizens advisory committee found this item comical because, for them, las orejas are the ears of an animal, typically a jackrabbit or a mule. The correct way to refer to a human

ear, according to the committee, is "los oídos." In the analogy, the ownership of ears is not important. The question asks the child to associate a function. Nevertheless, it appeared to be an important distinction for adults who reviewed the test.

Item 29. The examiner says, "Las naranjas tienen cascara. Las personas tienen _____." (Oranges have peels. People have _____.)

Cascara has several meanings in Spanish. It can mean shell, husk or rind. Children who were asked this question associated cascara with rind which is typically eaten as part of the orange. As a result, they typically completed the analogy by responding, "carne" (meat). Oranges have rinds. People have meat. For the children of Santa Rosalillita, the rind is part of the meat of an orange.

Item 33. The examiner says, "Las cartas necesitan estampillas. Los pasajeros necesitan _____." (Letters need stamps. Passengers need _____.) Correct responses include tickets, visas, and passports.

Most of the children completing this item answered, "papeles" (papers) or "dinero" (money). In Baja California, passports and visas are called papers. Additionally, it seems logical to assume that passengers need money. A stamp could be considered a form of money, since it allows for the processing and delivery of a letter.

Comprensión Visual

Item 7. The youngster is shown an illustration of a pitcher. The examiner says, "See this?" and turning to the next page, the examiner continues, "Find one here." The child is shown four illustrations: potatoes, a lemon, an outdoor faucet, and a human arm and hand. The correct response is the outdoor water faucet because, like the pitcher, water pours from it. Most of the children in Santa Rosalillita have not seen an outdoor water faucet of this type, and as a result, they did not make the association. Most chose the arm and hand because one uses the arm and hand to pour water from a pitcher.

The author did not encounter specific items on the other subtests which appeared to be unfair to the children as a result of their lack of exposure to a specific word or illustration.

The sixth research question was: How might a specific rural Mexican environment impact youngsters and their performance on the Spanish ITPA.?

Living in rural Baja California usually means existing in physical isolation. The Transpeninsular Highway, running the length of Baja California, is the only viable artery connecting most of the peninsula's towns and cities. Billed as Baja's major thoroughfare, the highway lacks much of the sophistication in safety standards and engineering that are taken for granted in the United States. It is narrow, unpredictably rough, and is expected to support the weight of a continual string of 18 wheel truck and trailer rigs. Since most of the land

bordering the highway is unfenced, it is especially dangerous at night when cattle, horses, and burros wander across the highway. On its way down the peninsula, the highway slices through mile after mile of total desert wilderness. A potentially dangerous situation occurs if an automobile breaks down in the Baja wilderness. The foregoing discussion is appropriate here because, in the author's opinion, the Transpeninsular Highway, which was designed to hasten Baja's economic development, has created a barrier for many of the rural citizens of Baja. Many people prefer to stay near home and not use the road. Thus they are able to avoid a dangerous situation, but remain, with their children, in isolation.

Pueblos like Santa Rosalillita, which is ten dirt road miles west of the Transpeninsular Highway, are even more isolated. Some children of Santa Rosalillita do not leave the pueblo during their childhood. News from the outside world is brought in by traveling merchants who come with a variety of retail merchandise. The children of Santa Rosalillita are rarely exposed to the trappings of the modern world.

Many do not experience the excitement, confusion, and pollution of large cities. It is possible that in this they are lucky, but their exposure to art, music, literature, and ideas goes begging as well. Electricity might someday provide an exposure to new ideas and alternative activities through the mediums of television and radio. When and if it happens, the children and parents of Santa Rosalillita and the other pueblos of the Baja wilderness will at least have some new choices.

While the Pacific Ocean seems to have a major impact on the daily work schedules of Santa Rosalillita's residents, it does not appear to affect other areas of their lives. Most members of the community regard the Pacific as a place to work and little more. They generally describe the beach as pretty, but useful only for launching their dories. Only infrequently is the shoreline used as a place of recreation. Women are rarely seen on the beach, and children are admonished to play in the dirt and rocks around the houses. Women generally describe the beach as windy, full of blowing sand, lice, and scorpions. Fear and danger are often associated with the beach and the ocean. During the five months in residence, the author became aware that few people in Santa Rosalillita knew how to swim. Curiously, most of the dorymen neither use life jackets nor know how to swim. Additionally, the author failed to find a child under 13 years of age in Santa Rosalillita who knew how to swim. Children rarely use the beach for play. Activities such as shell collecting, rock collecting, or sand castle building were not observed by the author. Despite the appearance of a remarkable resemblance between the marine environments of Santa Rosalillita and its Southern California counterparts, the Pacific and its immediate coastal environment are perceived and used in very different ways in the two locations.

In summary, rural Mexican children who live in isolated conditions might find themselves at a disadvantage when confronting tests like the Spanish I.T.P.A. The disadvantage might be exacerbated if the rural child had little school related experience. The combination

of little schooling and geographical isolation might, in some cases, falsely portray the cognitive potential of a youngster.

Conversely, the majority of seven and nine year old children examined in Santa Rosalillita appeared to perform on a level consistent with urban Mexican children despite the factors of isolation and the lack of educational opportunity.

The seventh research question was: How does the concept of the importance of psychological position hold up with rural Mexican families?

Psychological position is a subjective interpretation of life. When an individual experiences a relationship with another person, at least four subjective perceptions are possible. Each person assesses the impact of the other person on himself, and each person perceives the impact made by himself on the other person. In a series of relationships such as might occur in a family or school classroom, an individual may recognize predictability in certain chosen behaviors. Patterns may emerge which serve to reinforce the perceptions that the individual has chosen about life and about himself. He acts "as if" the world exists as he perceives it. It is possible, then, to see behavior as a tool used to shape the world according to individual expectations and goals.

To illustrate, a review of the case of eight year old Manuel, which was used in an earlier section of this chapter, may be appropriate. As the youngest child in a family of eleven, Manuel may have been an entertainer in his infancy. He may have represented the last hope of his mother. Since he had a relatively large number of older sisters to watch him, Manuel may have assumed through time that he was there to

be watched. As a baby, his slightest move may have amused someone, and Manuel may have quickly learned that, no matter what he did, he was cute and at the center of someone's attention. From Manuel's viewpoint, it may have been a logical step to conclude that being cute and at the center of attention was important. As he grew older, his sisters moved away and the visual impairment suffered by his mother became severe. Manuel may have noticed a lot of changes in his environment, but his need to be at the center of attention did not change. For Manuel, it meant slightly different and perhaps more extended behavior. He became the center of attention once again when he danced and sang in the streets of Mexicali. When he arrived in Santa Rosalillita, Manuel found that what had been cute and entertaining in Mexicali was considered inappropriate and obnoxious in Santa Rosalillita. For Manuel, the basic perceptions about life remained, but his methods had to change. It may have seemed logical to use the same skills (singing and dancing) in different ways, and at inappropriate times. Well extended and bizarre behavior quickly taught Manuel that he could once again gain center stage. For Manuel, the shift from singing and dancing for applause and money to yelling off-key and kicking up dust for recognition may have been unnoticeable. His goal of creating attention for himself was realized.

While this is a lone example among many that were observed by the author in Santa Rosalillita, it is intended to illustrate the use of a psychological position in a Mexican family. From the author's observations, in families where each family member was recognized as

being worthwhile and accepted as a contributor to the family just as they were, the psychological position was much less obvious. By comparison, in families where the worth of an individual was predicated on the performance of tasks or the realization of parental expectations, competition among the children appeared to be more discernible, and psychological positions were more extended and observable.

The eighth research question was: How do rural Mexican children perceive education?

Most of the Mexican children interviewed by the author like to go to school. When asked what they liked about school, the majority of the children indicated that they liked to be with their friends and play games, soccer and softball being the most popular. When asked what they liked least, most of the children said that they least liked to do seatwork. Arithmetic and language were the subjects most commonly named as being least enjoyed.

Education does not appear to be seen by Mexican children as a means to upward economic mobility or to employment. The combination of geographic isolation and the unified economic purpose of the community lures most of the male children to follow in the footsteps of their fishermen fathers. Leaving Santa Rosalillita for other types of employment seems to be an unattractive alternative for the majority of young males.

However, the author encountered a few exceptions. One youngster, whose father did not live in Santa Rosalillita, wanted to leave and become an airplane pilot. Another young man, who was the second of

two brothers, wanted to leave and become a truck driver. Several girls wanted to go to a secondary boarding school and learn to be school teachers. However, most of the girls who were interviewed wanted to stay in Santa Rosalillita, marry, and raise children. In Santa Rosalillita, as in many other parts of Mexico, young ladies become eligible to receive male callers when they reach 15 years of age. This is usually marked by a celebration called a quinceañera, in which the young lady is formally introduced to the community.

For most of the children and adults of Santa Rosalillita, useful knowledge, i.e., knowledge worth having, is knowledge which has immediate utility. To illustrate, the author entered into a number of informal discussions with the citizens of Santa Rosalillita about the purpose of education. Generally, education is most useful when it provides knowledge that can be used to sustain the community, or to make life better. A better life was usually defined as doing less physical labor, or being provided with the means to acquire more money.

Learning the Spanish language is important because it provides a means to maintain communication in the community. Learning arithmetic is important because it enables an understanding of weights and measures and helps an individual to handle his money. History is not so important because it has already happened.

The author and his wife were asked to teach an English class at the school. English is generally seen as important knowledge to possess because it is the language used by Americans. The ability to communicate with Americans is seen as useful for several reasons:

1. Most of the machinery, including boats, cars, and seafood processing equipment in Santa Rosalillita, comes from the United States.
2. Americans who visit Santa Rosalillita usually bring money and gifts.
3. Americans who make Santa Rosalillita a regular vacation stop can be asked to bring items from the United States which are needed or wanted but are unobtainable in Santa Rosalillita.

The class in English was taught in one hour time segments, and was generally held three times a week. The class was enthusiastically received. The youngsters generally appeared eager to use their new language skills with the researcher's family, as well as with other English speaking arrivals who visited Santa Rosalillita.

In summary, the children of Santa Rosalillita typically do not see education as a means to other or better employment. Knowledge is worth having when it can be seen to be presently useful. School is generally an enjoyable experience, providing one with the opportunity to be with friends and engage in organized activities.

The ninth research question was: Is the concept of teleology useful in interpreting data obtained from the I.T.P.A.?

Earlier in this study, it was suggested that diagnostic tests are usually interpreted within the context of cause and effect relationships, the emphasis being placed on the possession of a trait or condition, its subsequent labeling, and causal identification. In contrast,

by looking at a symptom or trait teleoanalytically, it is possible to determine the social utility or purpose of a condition.

In educational diagnostic testing, causal relationships are usually drawn to some form of organic impairment or some social or environmental condition which exerts causal influence on the child. Either way, it is implied that something is being done to the child which creates involuntary responses and ultimately produces a possible feeling of helplessness on the part of the child and significant others in his life.

A teleological interpretation implies that a youngster is in control of a behavior or symptom and may be using the behavior as a means to a goal. The prognosis becomes less a resignation to helplessness, and more a redirection of energy through encouragement.

The condition of dyslexia can be seen as an organic disorder, the result of causal social and environmental factors, and as a condition of social utility. If the employed diagnostic procedures yield evidence that a neurological disorder is present, the condition can be seen as irreversible. Such a diagnosis can be devastating or challenging. If a youngster who received such a diagnosis was subsequently pitied and perceived as helpless by others in his life, he might be inclined to view himself as useless and pitiable. The condition of dyslexia could turn into a condition of paralysis.

If, on the other hand, the youngster was told that he possessed a slightly different set of cerebral conditions, but that he shouldn't let it stop him from trying whatever he wanted to do, the youngster

might be encouraged to see the condition as a hurdle, but not a roadblock. Since he does not see himself as pitiable, he can use the strengths he has to make a useful contribution, and perhaps overcome the condition. The way a person chooses to view disabilities like dyslexia, and the use they choose to make of the condition, may be more important than the possession of the disability.

The label of dyslexia can also be applied to a person who has difficulty reading but who does not portray evidence of neurological disorder. In such a case, it becomes logical to investigate the possible purposes that are served by an inability to read. It is possible that the dyslexic-like behavior can be identified as a means to achieving a goal rooted in the social sphere of a discouraged child. Under such circumstances, it can be seen that to regard the condition of dyslexia as a possession becomes even more discouraging to the child.

In summary, a teleological point of view allows another dimensional perspective on behavior. As such, its usefulness can be logically applied not only to the interpreting of tests, but also to the remedial prescription.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this investigation was to study the cognitive and psycholinguistic functions of rural Mexican children as measured by the Spanish adaptation of the Illinois Test of Psycholinguistic Ability. The test scores of the rural Mexican children were compared to the test scores of two groups of urban Mexican children to determine whether any differences exist between the rural and urban groups.

Procedure

A group of 59 children, aged four to nine, were individually tested using the Spanish I.T.P.A. The children all lived in Santa Rosalillita, a small, rural fishing cooperative in Baja California, Mexico. The children were all monolingual Spanish speaking. The raw performance scores for the ten individual subtests of the I.T.P.A. were combined and compared to the combined performance scores of two groups of urban children, using two directional t tests calculated at .01 level of confidence.

The performance scores were also converted to scaled scores and profiled. The profiles were used as mediums to explain and interpret the observed performance of youngsters with regard to various environmental, psychological, and physical test correlates. Additional information was gathered about the children and their families through

the use of a verbal questionnaire and the informal observations made by the author during his residence in Santa Rosalillita. This information was also used to address a series of seven additional research questions.

Results

The sample of rural Baja California children was partitioned into five, seven, and nine year old subgroups. The four year old youngsters were excluded from statistical analysis. The relevant results of this study are:

1. There appears to be a significant difference between the scores of the rural five year old children from Santa Rosalillita and the scores of the urban five year old children.
2. There were no significant differences between the scores of the rural seven and nine year old children from Santa Rosalillita and the scores of the seven and nine year old urban Mexican children.
3. Related physical, environmental, and psychological correlates can serve as aids in test interpretation and diagnostic processes.

Previous speculation had suggested that significant differences in test performance might be observed in Mexican children, depending on the geographic locale in which they lived and the child rearing practices employed by the parents. In the case of the children from Santa Rosalillita, it seems possible to both verify and negate the

speculation. The five year old rural children seemed to represent a different population of youngsters when they were compared to five year old urban children. Conversely, the seven and nine year old rural children appeared to perform consistently with the established urban norms.

Earlier studies using the English Version of the I.T.P.A. in the examination of Mexican American children suggested that the Hispanic children appeared to be superior in tasks involving Visual Sequential Memory. No such superiority was encountered within the age sample of rural Mexican children.

Implications and Conclusions

The question should be raised as to the representative nature of the sample of children from Santa Rosalillita. It is believed that the sample accurately represents the population of rural children living in Baja California. The sample may not be representative of rural children living on Mexico's mainland. As a result, caution should be exercised in any attempt to generalize the findings in this study to other rural Mexican or rural South American children.

The results of this investigation imply that a potential exists with the Spanish I.T.P.A. for misdiagnosing and mislabeling rural Baja California children, especially three, four, and five year olds. The probability of harming a youngster in this way can be minimized by using the Spanish I.T.P.A. as one instrument among several, and by providing a careful examination of test correlates with each child. The youngster's exposure to school related experiences can be a critical element

of information to use in prescribing a program and appropriate educational activities.

The Spanish I.T.P.A. protocol provides a scaled score profile chart which is intended to illustrate measurable psycholinguistic processes. Seen as a series of entities, the profile plot points can reflect uncertain or unexplainable causality. But the points can do more than fix a symptom in isolation. A profile can also be seen as a constellation, the reflection of a holistic human system. Taken together, the points can model synergy in that they reflect something more than the sum of their separate parts. As a pattern, the plot points demonstrate how processes fit together and work for the individual rather than how the individual is modeled according to his processes. The implication is hope for the diagnostician. If a cognitive or psycholinguistic disability can be seen as something besides a possession with controlling influence, then remediation can be viewed as more than a discouraging fight with an impossible foe. If a person, and not a possession, is treated, then opportunities are automatically created for the person to remodel the use of his cognitive and psycholinguistic processes.

Suggestions for Future Research

Since this investigation was limited to the children of rural Baja California, one suggested piece of future research would be a similar study with rural children living in Mexico's mainland. Additionally, research into appropriate remedial methods and materials for immigrating Hispanic youngsters, and creative ways of assimilating

them into the American educational system might provide extremely useful information.

It is also recommended that the Spanish I.T.P.A. be subjected to rigorous validity and reliability analyses with the intent of making the instrument more valid and reliable, especially for three, four, and five year old Mexican youngsters.

Finally, it is recommended that future studies of this kind be done by people representing different disciplines. An anthropologist educational psychologist, or a student in special education, for example, might see circumstances similar to those encountered in this study quite differently, and in so doing, provide new and valuable information to people who are interested in helping Mexican children.

APPENDIX A

THE QUESTIONNAIRE IN ENGLISH

Questionnaire

1. Name _____ Age _____

2. Location of residence _____

3. How many in the family _____

4. How many brothers and sisters _____

5. Description of each sibling

NameAgeDescription

<u>Name</u>	<u>Age</u>	<u>Description</u>

6. Description of self _____

7. Description of parents _____

8. Family climate

How are tasks accomplished? _____

How are you disciplined? _____

How does your family have fun? _____

9. What would you like to do when you become an adult?
10. Nutrition
 - a. What do you usually eat for breakfast?
 - b. What do you usually eat for lunch?
 - c. What do you usually eat for dinner?
 - d. Does anyone in your family ever use alcohol? Who? How much?
11. Do you go to school?
12. Do you like school?
13. What do you like about school?
14. If you don't like school, what is the thing you don't like about it?
15. What do you do to help the family?
16. What do you do for fun by yourself?
17. What is your earliest recollection?

APPENDIX B

THE QUESTIONNAIRE IN SPANISH

Cuestionario

1. Nombre _____ Edad _____
2. Dirección de domicilio _____
3. ¿Cuántos personas hay en la familia? _____
4. ¿Cuántos hermanos y hermanas tienes tú? _____
5. Descripción de cada hermano y hermana

<u>Nombre</u>	<u>Edad</u>	<u>Descripción Personal</u>
		Haga una descripción de 31 (ella) en términos de apariencia física, emocional y intelectualmente.
6. Haga una descripción de usted mismo. (Que tipo de niño eres tú.)
7. Describa a sus padres.
8. Ambiente familiar
 - a. ¿Cómo marchan las cosas en la casa? _____
 - b. ¿Cómo te enseñan tus padres? _____
 - c. ¿Cómo se divierten en tu casa? _____
9. Qué te gustaría hacer (ser) cuando grande?
10. Alimentación
 - a. ¿Qué cosas comes al desayuno?
 - b. ¿Qué cosas comes al almuerzo?
 - c. ¿Qué cosas comes al merienda (por la noche)?
 - d. ¿Quién toma vino o cerveza or tequila (alcohol)?

11. ¿Vas a la escuela?
12. ¿Te gusta a la escuela?
13. ¿Qué cosa es lo que más te gusta de la escuela?
14. ¿Si la escuela no te gusta, qué es lo que no te gusta la escuela?
15. ¿Ayudas a tu familia? ¿Cómo lo ayudas?
16. ¿Cómo te entretienes?
¿Cómo te diviertes?
¿Cuáles son tus diversiones favoritas?
17. ¿Cuál es el recuerdo mas antiguo que tú tienes?
¿Te acuerdas de los cosas que te pasaron cuando eres chiquitito?

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