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ATTITUDES AND PERSONALITY TRAITS
OF ELEVENTH GRADE PUERTO
RICAN AND MICHIGAN STUDENTS

By

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ABSTRACT

ATTITUDES AND PERSONALITY TRAITS OF ELEVENTH GRADE PUERTO RICAN AND MICHIGAN STUDENTS

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It is important to the success of international and interhuman relations in the Americas that there is an understanding of 1) the differences and similarities in attitudes and personality between the Spanish-American and the stateside American, and 2) the probable effect upon attitudes and personality of the two cultures being inter-related. The unique mixture of the traditional Spanish and the modern stateside cultures in Puerto Rico was considered an appropriate setting for investigating the impact of culture upon attitudes and personality.

Methodology and instrumentation have been two major difficulties in cross-cultural research of the past. Earlier research was conducted by sociologists and anthropologists using observational techniques appropriate to the study of primitive cultures. In 1964, Farquhar and Christensen developed instruments called the P-Scales to study the motivational factors influencing the academic achievement

of Puerto Rican students; their basic assumption was that certain attitudes and personality factors characteristic of the Spanish culture would differentially affect motivation. Until the present investigation, the P-Scales had not been administered in the states, and a direct cross-cultural comparison of the pertinent attitudes and personality facets was not possible. The work of Farquhar and Christensen therefore provided the stimulus as well as the instrumentation and methodology for the present study.

The hypotheses of this study were focused on five general areas: 1) authority relations, 2) sex role, 3) implicit world view, 4) work orientation, and 5) personality. It was assumed that the attitudes and personality of Puerto Rican students would reflect the traditional Spanish culture and would stand in contrast to the attitudes and personality of students in the states.

The hypotheses were tested using the P-Scales (Scale of Individual Preferences, Generalized Situational Choice Inventory, and Human Trait Inventory) with a stratified random sample of 400 Michigan eleventh graders and 400 Puerto Rican eleventh graders. Stratification was based upon rural-urban residence, and the sample of each culture consisted of 200 males and 200 females.

For the purpose of item analysis, the sample of each culture was further divided into validation and cross-validation groups, each consisting of 100 males and 100

females. Four separate analyses were conducted: 1) Michigan males-Puerto Rican males, 2) Michigan females-Puerto Rican females, 3) Michigan males-Michigan females, and 4) Puerto Rican males-Puerto Rican females. To collect items for the subsequent factor analysis, all items (222) were validated and cross-validated using a one-tailed chi square test of significance with alpha set at the .20 level for inclusion or exclusion of items. Those items which cross-validated were retained for further analysis. For all scales, a total of 164 items discriminated between males of the two cultures, 160 items were significant for females, 47 items were obtained in the intra-cultural comparison in Michigan, and 80 items discriminated between Puerto Rican males and females.

Factor analyses yielded five factors for males in the two cultures, seven for females, six for Michigan males and females, and six for Puerto Rican males and females. Across the two cultures, the first factor for males described a person who does not like school and whose parents discourage him from continuing; it was labeled parental pressure. The second factor was concerned with self-improvement and accomplishment and was labeled extrinsic versus intrinsic achievement. Factor three reflected an other-oriented social posture and was named social orientation. Factor four was an expression of positive parental attitudes toward education and was labeled

parental valuing. The fifth male factor was focused on anxiety over various kinds of interpersonal contacts and was titled social interaction.

The first factor for females of the two cultures was maternal pressure and described a person who identifies with and seeks advice from her mother. Factor two focused on negative attitudes toward education and was called educational destiny. The third factor, social orientation, described a person who makes concessions of personal interest to placate friends. Factor four contained a theme of working hard to achieve something important and was labeled work orientation. Factor five delineated a person who is responsive to power figures and was titled authority relations. Factor six, paternal pressure, was concerned with yielding to the authority of the father. The seventh female factor reflected a desire for self-improvement and accomplishment and was labeled achievement performance.

The first factor for males and females in Michigan was educational destiny, an expression of negative attitudes toward education. Factor two was concerned with the sources of success laying outside of the efforts of the individual and was labeled, intrinsic versus extrinsic achievement. The third factor, work orientation, contained a theme of working hard to achieve success. Factor four comprised a theme of wanting to exercise control over social situations without alienating friends and was called social orientation.

Factor five described a person who sees life from a masculine, competitive viewpoint and was labeled role identification. The sixth stateside factor reflected the attitude that school was a woman's world and was titled school orientation.

For Puerto Rican males and females, the first factor contained negative attitudes toward education and was labeled educational destiny. Factor two reflected the desire for self-improvement and accomplishment and was labeled achievement orientation. Factor three was concerned with outstanding achievement in school and was called academic orientation. The label of social orientation was attached to the fourth factor which described a person who is submissive in his relationships with others. Factor five was focused on gaining power and esteem through school and was titled mobility through education. The sixth Puerto Rican factor contained a theme of work being pleasant, good, a value in itself and was labeled work orientation.

The factor structure which emerged through factor analysis was very similar to the hypothesized factor structure. Only the area of sex role failed to materialize in any of the four comparisons. The directionality of the factors was generally consistent with predicted directions for cross-cultural analyses. However, factor direction was frequently the reverse of what was hypothesized for intra-cultural comparisons.

Puerto Rican students were more responsive to authority than Michigan students, and Puerto Rican males were more authority oriented than the females. The females of both cultures were more positively oriented toward work than were the males. The females also valued academic achievement more than the males. Michigan males were more concerned with success in school than Puerto Rican males, but the reverse was true for females. Michigan females were more disposed to see themselves as the source of their success than were Michigan males or Puerto Rican females. The females of both cultures were more inner-directed than males, and Michigan students reported themselves as more self-directed than their Puerto Rican counterparts.

It was apparent that considerable difference continues to exist in the attitudes and personality of state-side and Puerto Rican students, but changes are occurring, especially among females. The data presented a picture of an emergent female in both cultures, a woman less bound to old authority patterns, more self-directed, and more concerned with her own achievement. The Puerto Rican female seemed to be internalizing the stateside value system while the male held more closely to the traditional Spanish culture of the island.

TO

My children, Marti, Cheri, Dan, Julie
and Mike and especially to my love, Chris.

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CHAPTER I

THE PROBLEM

Puerto Rico, like all Latin American nations, has a substantial Hispanic heritage. Traditionally, cultural anthropologists and sociologists attribute to the Spanish a humanistic, "now-oriented" outlook on life. Lines of authority and sex role differences are clearly defined, and religion and interpersonal relationships are more important than economic gain. Yet, the island has been strongly influenced by the sovereignty of the United States and its "future-oriented," democratic and economically centered culture. The result is a people who, while still clinging to many of the Spanish ways, are slowly adopting stateside characteristics. This unique mixture of the traditional Spanish and the modern stateside cultures is fertile ground for investigating the impact of culture upon attitudes and personality.

The Puerto Rican situation is in many ways a testing ground for the future of the Americas. As the nations of the two continents become more interdependent politically and economically, cultural interchange

inevitably increases. It is important to the success of international and interhuman relations in the Americas that there is an understanding of 1) the differences and similarities in attitudes and personality between the Spanish-American and the stateside American, and 2) the probable effect upon attitudes and personality of the two cultures being inter-related. Both of these factors can be probed through the study of the Puerto Rican.

While cultural mixing occurs through political and economic channels, it also occurs more intimately through immigration. Many people of Spanish background now live in the United States. The Puerto Ricans in the stateside cities are people in cultural conflict. Puerto Rican ghettos and the rural slums of migrant workers are evidence of failure in cultural integration. Understanding the attitudes and personality characteristics of these people is essential to successfully educating them and incorporating them into life in the United States.

In attempting to ferret out differences and similarities of attitude and personality between cultures, two major difficulties are methodology and instrumentation. The traditional manner of gathering such data has been observation and interviewing, followed by a subjective analysis of what was observed. While such information provides direction and hypotheses, it is not an adequate basis for knowledge. In fact, personal biases and

distorted perceptions often hinder understanding people of other cultures. What is needed are more precise, objective measures of cultural differences as expressed in the attitudes and personalities of the people.

In 1964, Farquhar and Christensen undertook a project to study motivational factors influencing the academic achievement of Puerto Rican high school students.¹ A major assumption underlying their work was that certain attitudes, facets of personality development, and child-rearing practices characteristic of the traditional Spanish culture, differentially affect motivation (the study is discussed in detail in Chapter II). The testing of this assumption was implemented through the development of the P-Scales, an instrument designed to measure non-intellective factors in motivation.

In addition to the P-Scales, Farquhar and Christensen administered a Spanish translation of the M-Scales to Puerto Rican students. The M-Scales were developed through earlier research by Farquhar² to investigate motivational factors in the states. The use of the M-Scales with both Puerto

¹W. W. Farquhar and E. W. Christensen, The Motivational Factors Influencing Academic Achievement of Eleventh Grade Puerto Rican High School Students, Final Report of Cooperative Research Project No. 2603A and B, 1968 (Office of Research and Publications, College of Education, Michigan State University, 1968).

²W. W. Farquhar, Motivation Factors Related to Academic Achievement, Final Report of Cooperative Research Project No. 846, 1963 (Office of Research and Publications, College of Education, Michigan State University, 1963).

Rican and stateside populations allowed Farquhar and Christensen to draw cross-cultural comparisons regarding motivation.

Because the P-Scales were administered only in Puerto Rico, cross-cultural information does not exist for that set of scales. Moreover, direct intra-cultural comparisons have not been made with the P-Scales. That is, the responses of males and females within each culture can yield comparative data which is not now available. Consequently, administering the P-Scales to a representative sample of United States students and comparing the results with data available through Farquhar and Christensen's work can provide information about attitudinal and behavioral differences in the two cultures and can add to the methodology of cross-cultural research.

Purpose

The purpose of this study is 1) to test certain assumptions about the differences and similarities in attitudes and personality between students in the insular Puerto Rican culture and students in the continental United States culture, and 2) to test the same assumptions regarding differences and similarities in personality and attitudes between male and female students within each of the two cultures.

Theory

Farquhar and Christensen³ identified six areas of study in which attitudes and behavioral characteristics appear to be influenced by the Hispanic tradition in Puerto Rico. These attitudes and characteristics stand in contrast to those common to the culture of the continental United States. Five of the areas have been selected for the present study.

Authority Relations

Historically, the Puerto Rican culture has exemplified the male authoritarian ideal, the father being the absolute authority in the family. While the familial orientation appears to be an outgrowth of European Catholicism, a more general authoritarian attitude seems to be the result of the early colonial period. The Puerto Rican tends to accept strong leadership passively; if he exercises authority, he does so in a domineering fashion. Few moves are made in office, shop, field, or government without the approval of the man in charge. While limited changes in this attitude are apparent in some areas, it continues to be a predominant characteristic of the people.⁴ By contrast, there is less respect for authority,

³W. W. Farquhar and E. W. Christensen, op. cit.

⁴Gordon K. Lewis, Puerto Rico: Freedom and Power in the Caribbean (New York: MR Press, 1963), pp. 264-271 and 475-480.

a more democratic approach in the stateside family and culture.⁵

Sex Role Differences

Traditionally, Puerto Ricans have assumed that innate psychological differences exist between males and females, the latter being morally weak and mentally inferior. A double standard is socially enforced in which the female is expected to present herself to marriage as a virgin and the male is expected to have extensive pre-marital sexual experience. As a result the culture maintains an elaborate system of masculine checks upon feminine behavior. Industrialization and the consequent employment of women in factories has been a stimulus to female emancipation, but the woman continues to be relegated to a position of lower status in the insular culture.⁶ While some inequality exists in the states, males and females are treated as social equals in most important respects.⁷

⁵Edgar Z. Friedenberg, The Vanishing Adolescent (New York: Dell, 1962), pp. 25-28.

⁶Gordon K. Lewis, op. cit., pp. 265-271.

⁷Robin M. Williams, Jr., American Society: A Sociological Interpretation (New York: A. A. Knopf, 1961), pp. 60-67.

Work Orientation

The "Protestant Ethic" is not a part of the Puerto Rican value system; work is not a virtue. The orientation is one of "being" rather than "becoming," conformity rather than initiative and independence. Yet, the practicality of economic gain appears to be making inroads on the traditional Spanish culture, especially since the advent of industrialization. There is some evidence that the young are beginning to break away from the conformity of the authoritarian family.⁸ While some change in attitude is occurring, work continues to be an end in itself, a value incorporated into the ego ideal of the stateside personality. Action, individualism, and material success are a major part of the fabric of the United States culture.⁹

Implicit World View

Puerto Ricans are humanistically rather than scientifically oriented. Poetry, literature, and philosophy are of more interest and concern than science and industry; however, the entry of women into the factories has likely altered the feminine attitude moderately. Luck and fate are viewed as responsible for success rather

⁸Theodore Brameld, The Remaking of a Culture: Life and Education in Puerto Rico (New York: Harper and Bros., 1959), p. 304.

⁹Robin M. Williams, Jr., op. cit., pp. 421-424.

than individual effort. The use of horoscopes, fortune tellers, prayer, and other superstitious means of affecting the turn of events is quite common. An activist attitude is developing but, with the exception of institutions of higher education, the more deterministic view prevails.¹⁰ The scientific attitude and secular rationality are characteristic of the stateside culture.¹¹

Personality Development

Because of regional and subcultural differences, there is some question about the validity of defining a national personality. Nevertheless, certain personality characteristics may be expected to be common to the people of any particular culture. Because of the subordinate position of the female in Puerto Rican society, withdrawal is a defense likely to be used by women. The pervasive influence of superstition and determinism suggests that reality testing may be inadequate. This notion is further supported by the existence of cultural myths, such as the courtship myths which inadequately prepare both male and female for the realities of marriage and sex. Self-initiated and self-maintained long-term goals are not characteristic of Puerto Rican youth.¹² The affluent

¹⁰Theodore Brameld, op. cit., pp. 117-130.

¹¹Robin M. Williams, Jr., op. cit., pp. 454-456.

¹²Theodore Brameld, op. cit., pp. 117-130.

culture of the States encourages youth, males and females, to participate in long-range planning.¹³ Efficiency and practicality permeate the stateside culture.¹⁴

Research Hypotheses

Toward achieving the purposes stated above, hypotheses focused on five areas of expected cultural differences are proposed (the bases for the hypotheses are found in the preceding section of theory).

Area I: Authority Relations

Hypothesis: Puerto Rican males and females will accept an authoritarian orientation to life, and U. S. males and females will reject such an orientation.

Hypothesis: There will be no difference between males and females within each culture.

Area II: Sex Role

Hypothesis: Puerto Rican males and females will view the female as inferior to the male, and stateside males and females will view the sexes as equals.

Hypothesis: There will be no difference between males and females within each culture in their attitudes toward sex role.

¹³Theodore Brameld, op. cit., pp. 117-130.

¹⁴Moses Abramovitz, "Growing Up in an Affluent Society," in The Nation's Children, ed. by Eli Ginzberg (New York: Columbia University Press, 1960), pp. 158-179.

Area III: Implicit World View

- Hypothesis: Michigan males and females will place greater value on academic achievement than will Puerto Rican males and females.
- Hypothesis: U. S. males and females will see themselves as the source of success in life whereas Puerto Rican males and females will view others as the source of success.

Area IV: Work Orientation

- Hypothesis: Stateside males and females will value hard work, initiative, and independence more than Puerto Rican males and females.
- Hypothesis: Stateside males will value initiative and independence more than stateside females.
- Hypothesis: Puerto Rican males will value initiative and independence more than Puerto Rican females.
- Hypothesis: There will be no difference in the value of hard work to either sex within each culture.

Area V: Personality

- Hypothesis: Puerto Rican females will exhibit more withdrawal and poorer reality testing than Puerto Rican males and stateside females.
- Hypothesis: There will be no difference between U. S. males and U. S. females in withdrawal and reality testing.
- Hypothesis: U. S. males will be more inner-directed than U. S. females and Puerto Rican males.
- Hypothesis: There will be no difference between sexes in Puerto Rico on inner-directedness.

Hypothesis: Establishing long-term goals will be more characteristic of state-side males than Puerto Rican males.

Hypothesis: Establishing long-term goals will be more characteristic of U. S. females than Puerto Rican females.

Hypothesis: There will be no difference between sexes within each culture in establishing long-term goals.

Overview

Within Chapter II a review of the literature most pertinent to the present study may be found. The general design of the investigation, including sample, instrumentation, statistical hypotheses and data analysis procedures are presented in Chapter III. Chapter IV consists of an analysis of the data. In Chapter V the results of the analysis are discussed. The summary and conclusions are presented in Chapter VI.

CHAPTER II

RELATED LITERATURE

The literature pertinent to the present study is divided into three topics: 1) an overview of the nature and development of cross-cultural and national character research, 2) an analysis of the methodology and results of anthropological-sociological research in Puerto Rico, and 3) a discussion of current, cross-cultural studies of Puerto Rico and the United States.

The Nature of Cross-Cultural and National Character Research

Until recently nearly all cross-cultural and national character research was conducted by anthropologists and, to a lesser extent, sociologists. Following World War II much effort was directed toward studies into national character; since 1960, such studies are rare. Hoebel¹ pointed to probable reasons for the decline in such work. The anthropologist tried to transfer tools

¹E. A. Hoebel, Anthropological perspectives on national character, Annals of the American Academy of Political and Social Science, 370 (March, 1967), pp. 1-7.

appropriate to the study of tribal characteristics in simple societies to the study of complex, mass societies. Such research was based upon observation and was flavored by the notions of the investigator. Validation of the results was dependent upon how well they fit the knowledge of other anthropologists regarding comparative data. The response of anthropologists to an avalanche of criticism of their research was to move toward analyzing institutions within a society in an effort to ascertain cultural characteristics. Findings were then projected to describe individuals within a culture. Hoebel found little advantage to the new direction which he considered a highly questionable process.

As is evident in the analyses of specific studies later in this chapter, the anthropologist and sociologist used primarily intuitive grounds for the selection and interpretation of data. The use of traditional field methods incorporated the bias of the researcher. Rarely were statistical procedures used beyond the level of calculating percentages. Sampling procedures were crude if attempted at all.

An example of the criticism launched against previous studies was an article by Maccoby.² He contended that Mexican national character had been misrepresented,

²M. Maccoby, On Mexican character, The Annals of the American Academy of Political and Social Science, 370 (March, 1967), pp. 63-73.

especially the concept of Machismo, an exaggerated role of masculinity. His argument was that Machismo relates only to the geographical area most often studied by social scientists and that it is a regional characteristic.

The poor quality of past work does not reduce the need for knowledge about the effect of culture upon character. Martindale³ stated that while a sociology of national character is yet to be developed, it is unavoidable if sociologists are to address themselves to the critical problems of this age. He pointed out that nationalism is world wide and that minorities everywhere are confronting the properties they see in other nationals with the properties they see in themselves. Similarly, Reisman⁴ concluded that there is a need to be knowledgeable about national character because it affects national conduct and vice versa.

Past research is inadequate, and the need to know is now more pressing. Toward that end, current research such as that of Farquhar and Christensen and the present study employ more sophisticated empirical methods, e.g., careful sampling and statistical analyses.

³D. Martindale, The sociology of national character, Annals of the American Academy of Political and Social Science, 370 (March, 1967), pp. 30-35.

⁴D. Riesman, Some questions about the study of American character in the Twentieth Century, Annals of the American Academy of Political and Social Science, 370 (March, 1967), pp. 36-47.

Anthropological-Sociological
Research in Puerto Rico

The following review of major research efforts in Puerto Rico illustrates the methodological shortcomings discussed above and provides a basis for drawing preliminary hypotheses about the nature of the Puerto Rican character. Until recently the best known work was a series of investigations conducted under the auspices of the 1951 Family Life Project in Puerto Rico: Stycos, Family and Fertility in Puerto Rico; Landy, Tropical Childhood; Hill, Stycos and Back, The Family and Population Control.

Stycos'⁵ study consisted of lengthy interviews with 72 husbands of lower-income class and their wives. He was aware of the many shortcomings of his work and stated that the results could not be generalized to all of Puerto Rico. His sample was biased because only lower class families in which the parents were still together after three to twenty years of marriage were selected. Stycos also considered the variable of interviewer bias, such as the tendency to emphasize the responses of the better educated subjects and the lack of understanding between respondents and interviewers because of cultural differences. In an effort to minimize such bias, the

⁵J. M. Stycos, Family and Fertility in Puerto Rico (New York: Columbia University Press, 1955).

interviewers were carefully trained. Questions were sequentially ordered from matter-of-fact ones to more open-ended ones.

In attempting to quantify the data, Stycos introduced additional chance for error. The quantitative analysis was achieved by counting responses which were clipped out of the interview form. The criterion for clipping responses was how well the researcher thought the response related to particular hypotheses. The probability of bias in selecting responses was great, thereby reducing the reliability of the data.

The results of Stycos' work which pertain to the present study can be divided into three of the five areas described in Chapters I and III: 1) authority relations, 2) sex role, and 3) personality.

Authority Relations Stycos found the Puerto Rican family to be patriarchal, the father being the feared and respected lawmaker. The mother was executrix of the father's commands and more dominant in childrearing. The ideal son was seen as obedient and respectful. Physical beating was an approved means of maintaining respect.

Sex Role Puerto Ricans viewed male thinking as superior to that of the female, the difference being organically based. Women were seen as sexually and morally weak while

the men were believed to be more evil and more sexual. In childrearing the male genitals were considered prettier than female genitals. Great attention was paid to the child's penis until about age seven, and he was praised for having an erection. The female child was clothed at an earlier age and much more cloistered. After the first few years, the female child received more attention and affection in the home. Stycos emphasized the male's anxiety over proving his superiority and the very limited avenues for expression of such superiority.

Personality As a result of cloistered treatment, females were relatively ignorant about the world and were denied the opportunity to realistically test the sexual and interpersonal relationship. The female's knowledge about marital relations was limited and distorted, characterized by fear and ignorance. While males were more sexually experienced, they were mother dependent and wanted wives like their mothers. Consensual marriage at an early age was common which Stycos saw as satisfying the female's romantic fantasies of freedom and security as well as her wish to rebel. Female aversion to sex was widespread as was marital dissatisfaction.

Stycos' methodology was poorly conceived, rendering impossible any generalization beyond his limited sample. Yet his conclusions are generally similar to those of later investigators.

Landy's⁶ study (the second in the Family Life Project Series) had two purposes: 1) exploratory-descriptive study of socialization in a rural Puerto Rican village (Valle Cana), and 2) systematic comparisons of child training and behavior between village families and families of an urban New England community. The sample of eighteen lower-class families was perhaps adequate for the purposes of the study, but being neither random nor representative, it was not a basis for generalizing results to the remainder of the Puerto Rican population. Two methods of data collection were used: doll play with children and interviews with mothers and fathers. Both techniques are fraught with potential for error. The rapport building skills of the interviewer and his bias in reporting what he has observed can greatly affect the data. Landy made an effort to validate interviews with mothers by comparing the responses of different judges. While such procedure is better than nothing, it is not much better. Another difficulty in the study, one which Landy recognized, was comparing the behavior of rural subjects in one culture with urban subjects in another. The methodology used by Landy leaves the accuracy of his data dependent upon the skills of interviewers.

⁶D. Landy, Tropical Childhood (Chapel Hill: University of North Carolina Press, 1959).

The results of Landy's research which have a bearing upon the present study can again be divided into the five areas described in Chapters I and III.

Authority Relations The balance of authority in the Puerto Rican family was heavily weighted in the direction of the father. Unquestioning obedience was demanded of children by parents. When compared to New England families, Puerto Rican parents used little praise or reasoning in discipline. While Valle Cana fathers had more authority than stateside fathers, they were less respected by their children.

Sex Role Landy reported that separation of the sexes occurred at every level of community life. The female was considered mentally inferior, innately weak and defenseless from male assault; the male was believed to be born with needs for antisocial and sexual aggression. Premarital sex was rigidly denied the female, but encouraged to the male. The mother was required to stay at home while the father was free to roam about. Toilet training for girls was more harsh and restrictive than for boys. The male was expected to prove his manliness, but had few ways of doing so. In comparison to New England, the handling of modesty and sexual behavior was much more severe.

Work Orientation The protestant value of work for its own sake was not believed, practiced or preached; the person who could get along with as little work as possible was seen as fortunate.

Implicit World View Landy found the Puerto Ricans to have a present-time orientation accompanied by minimal aspirations. Luck and the "fates" were seen as governing outcomes more than hard work. Advice of a spiritual medium was often respected as much as that of a medical doctor. Poor behavior of a child was blamed on inherited characteristics rather than on shortcomings in family relationships. Valle Cana parents offered little independence training, e.g., performing tasks, but males were more irresponsible than females. Compared to New England, Puerto Rican parents used more threats of danger from the environment and the supernatural to control their children. Puerto Rican males were reported to be very mother dependent.

Personality Puerto Ricans used denial as a major defense and communication was very poor, e.g., each mate displayed ignorance of the other mate's reactions to pregnancy. Most parents reported they would lie to a child if asked about intercourse. Girls often remained ignorant of sexual operations until married. Because aggression was discouraged

and severely punished, withdrawal was a frequent defense in times of conflict. When compared to the United States, Valle Cana children had fewer guilt reactions and less superego.

In spite of the shortcomings of Landy's research, many of his findings were supported by subsequent studies. The hypotheses of the present investigation were in part based upon his work.

The third study in the Family Life Series was a cooperative effort on the part of Hill, Stycos, and Back.⁷ The purposes of the project were: 1) to experiment with the possibility of changing the birth control practices of Puerto Rican families, and 2) to gain knowledge of the social-psychological dynamics underlying the high birth rate in Puerto Rico. The research was divided into three stages: 1) exploration, using the interview method with a limited number of families, 2) quantitative verification, using the survey method to verify data in stage one, and 3) experimental validation.

Stage two most closely resembles the present study. The questionnaire consisted of some scaled items plus some repetition of questions to determine how meaningful the questions were to respondents. The questionnaires were not duplicated in the appendices of the report (only

⁷R. Hill, J. M. Stycos, and K. W. Back, The Family and Population Control (Chapel Hill: University of North Carolina Press, 1959).

a general notion was provided) making it difficult to assess the quality of the questions.

Most of the study was focused on fertility control; the goal of social-psychological exploration was not realized except in a minimal way. What was learned supported the findings of the two earlier studies.

Recent Cross-Cultural Research

Current cross-cultural study in Latin America and the states has been characterized by the use of more sophisticated research techniques. Studies vary in the degree to which such methods are used, but the trend is clearly toward greater objectivity and less reliance on personal observation. Three projects demonstrate this shift. The first, Bourne and Bourne, combined the traditional anthropological approach with more modern techniques. The other studies, McGinn, Harburg, and Ginsburg and Farquhar and Christensen, were conducted using psychological research methods.

The intent of Bourne and Bourne⁸ was to investigate the impact of recent changes in Puerto Rico upon ten communities and to interpret changes in attitudes and values. The methodology reported by the authors was:

⁸D. D. Bourne and J. R. Bourne, Thirty Years of Change in Puerto Rico: A Case Study of Ten Selected Rural Areas (New York: Frederick A. Praeger, 1966).

1) to assess the quality and quantity of government programs in each locality, 2) to compare current descriptions of the communities with descriptions which were made of the same areas in 1932, 3) to send questionnaires to 245 residents, 4) to conduct 67 depth interviews, and 5) "free observation."

Stratified random samples of respondents were drawn for the questionnaires and interviews, stratification being on the basis of neighborhood within the community. Most of the data on attitudes came from the depth interviews. Too often the questions tipped off the desired answers, e.g., "Would you say that people nowadays are better informed of what is happening outside their barrio."

Much of the observation was done by six social workers who had also been part of the 1932 team. Their reports read more like novels than scientific observation, e.g., "Progress catches the eye as one starts on the improved road and all along with the new small but modern houses by the roadside."⁹ The overall effort of the study appeared to be that of a friendly group of social workers having a delightful time proving the effectiveness of the past work of social workers.

⁹D. D. Bourne and J. R. Bourne, op. cit., p. 209.

Although the major thrust of the project was concerned with socio-economic conditions, the reported changes in Puerto Ricans' attitudes have more bearing on the present investigation. Again the outcomes can be divided into those areas being studied in the present project. All data was reported in percentages.

Authority Relations The authors reported an attitude and posture of dependence upon the government, stemming from the paternalistic landlord system. Only six percent of the respondents saw the father as head and authority of the family; 31.4 percent saw the mother as having more ability to handle children.

Sex Role The largest percentage of those interviewed, 25.8 percent, saw husband-wife relations as worse than in the past. Reasons given were: wives working, divorce, too much freedom for wives, husband and wife having fun alone, wife too independent, wife feels she has the same rights as husband.

Work Orientation Ninety-eight percent of the respondents were more anxious to improve themselves than reported in the 1932 study. They were less fatalistic and less accepting of their status as inevitable.

Implicit World View

Most of the Puerto Ricans interviewed preferred the conditions of today over the past. They assumed more responsibility for making change occur and demonstrated greater initiative than thirty years earlier. At the same time, 30 percent were interested in spiritualism and attended meetings, an increase over 1932.

Substituting psychological instrumentation for the traditional method of prolonged observation, McGinn, Harburg, and Ginsburg¹⁰ designed a study to measure cross-cultural differences in the resolution of interpersonal conflict. Basing their assumptions on current theory about the Mexican personality and on Heider's P-O-X model, the authors hypothesized that when confronted with conflict with a friend, the Mexican subjects would yield to the ideas of the friend while the Michigan subjects would withdraw from the friend, maintaining their own ideas.

The instrument was designed like Osgood's Semantic Differential. Hypothetical two-person situations were prepared in which there was conflict because of opposing reactions to some idea. The subjects responded to the situations in three ways: 1) assuming the other person was a best friend, 2) assuming he was strongly disliked by

¹⁰N. F. McGinn, E. Harburg, and G. P. Ginsburg, Responses in interpersonal conflict by middle class males in Guadalajara and Michigan, American Anthropologist, 67 (December, 1965), pp. 1483-1494.

the subject, and 3) assuming he was slightly disliked but was good in some activity in which the subject did well. The investigators used a content analysis for equatability of the two forms, asking one Spanish speaking stateside subject to translate from English to Spanish and one Mexican subject to translate from Spanish to English.

Sampling was not random as the subjects either volunteered or were selected, thus introducing possible bias. A Mann-Whitney U test showed 16 of the 34 scales significant at $p = .0005$. All data was reported in percentages.

The results indicated that Michigan subjects were more upset over the conflict with the friend and more willing to break the relationship than were Mexican subjects. They stated that they would like the friend less and see him as wrong in judgement. Achievement values were more important to Michigan subjects who also reported being more disturbed by criticism of their ability.

Following the formal part of their research, the investigators checked to see if the subjects actually behaved as they reported on the paper and pencil test. The observed behavior of Michigan subjects was less hostile and more yielding than reported on the instrument.

The study most closely allied to the present investigation is that of Farquhar and Christensen. Because the research was quite complex in design, only those parts which are related to the present work are discussed.

Studying academic motivation of Puerto Rican students, Farquhar and Christensen¹¹ designed their research in three stages: 1) identification of under- and over-achievers, 2) the study of non-intellectual factors associated with achievement, and 3) the determination of valid constructs related to motivational discrepancies. It is stage two of this project which is closely related to the present study and from which the present study was conceived.

In an earlier project in Michigan,¹² Farquhar developed a series of attitude scales, the M-Scales, to objectively measure academic motivational factors. These scales served as the basis for the Puerto Rican study. To the M-Scales were added new items and two new scales designed to study dimensions of the Puerto Rican culture which might be uniquely related to motivation. These dimensions were authority relationships, attitude toward the opposite sex, attitude toward work, and personality development. The new items and scales were called the P-Scales. In addition, a parental interview questionnaire was developed to assess differences in attitude and child rearing practices between mothers of low-motivated students and mothers of high-motivated students. The M-Scales, the

¹¹W. W. Farquhar and E. W. Christensen, op. cit.

¹²W. W. Farquhar, op. cit.

P-Scales, and the Parental Interview Questionnaire were the data gathering instruments used by Farquhar and Christensen.

The population was limited to eleventh grade public school students in Puerto Rico. An initial sample of approximately 7000 students were administered the instruments discussed above. This sample was geographically stratified on the basis of 1960 Census data with representative numbers being tested in San Juan, other urban areas, and rural areas. Smaller samples stratified on the bases of residence, sex, and achievement were drawn randomly from the initial sample for further study.

Three analyses were performed on the data: 1) item analysis to select items which cross-validated in discriminating between over- and under-achievers, 2) factor analysis of cross-validated items, and 3) reliability estimates. All items were submitted to validation and cross-validation using a chi-square test of significance with alpha set at the .20 level. For all scales a total of 63 significant items were retained for males and 90 for females. On the P-Scales only, there were 13 significant items for males and 28 for females. Treating the 63 male items and the 90 female items as a test, a reliability estimate of .861 was computed for male items and .809 for female items.

The factor analysis was supportive of some of Farquhar and Christensen's hypotheses and not of others. The hypothesis that authority relations would be a discriminating element was supported by the emergence of a factor that was labeled educational resistance. Highly motivated males tended to accept the authority of the school while low motivated males had difficulty with lines of authority.

Most of the items directed toward distinguishing sex roles did not survive cross-validation, and no pertinent factor emerged. An examination of significant items did indicate that males saw themselves as dominant and females as inferior.

Relative to work orientation, there was general verification for both sexes that highly motivated students valued hard work, initiative and independence. However, there was not clear evidence that the construct was associated with the social-cultural structure.

None of the hypotheses regarding implicit world view were supported. Contrary to predictions, students seemed to believe that hard work, not luck, was the avenue to achievement. There was also indication that students were more self-reliant than expected.

In the area of personality development, withdrawal emerged as a female factor and not as a male factor. The reality testing of the Puerto Rican female was not as low

as was hypothesized. The hypothesized inner-directedness dimension did not materialize. There was some indication that highly motivated females had a need for long-term involvement and a capacity for delaying rewards, an unexpected outcome.

Results of the Parental Interview Questionnaire indicated that nearly all mothers felt that their children should not make decisions without consulting the parents. Family ties were more strict for females than for males. The separation of the girl from her home was seen as a difficult task, somewhat mitigated by the academic arena where she could assert her independence and individuality. Mothers reported aggressive behavior as the most common discipline problem, scolding being the usual consequence. A general impression was that ideals exist among the mothers concerning the necessity of education, but specific tasks and attitudes essential to attaining this goal were not clearly delineated.

Although considerable information was gained from the study, the total outcome was less than anticipated. Farquhar and Christensen suggested several plausible reasons for the modest results. It was difficult to gain complete data on many students as they avoided some of the initial testing situations. Consequently, data is not available on those students who might be labeled "most fearful." Secondly, those students from the upper-middle

and upper classes attended private rather than public school and were thus excluded from the study. Finally it was conceivable that hypotheses regarding cultural differences were incorrect because the culture had changed in the past few years. A function of the present study is to assess the likelihood that this latter factor affected the results of Farquhar and Christensen's work.

One of the primary recommendations was that future research in Puerto Rico not be so concerned with demographic stratification. Significant differences in attitude between rural and urban students were not observed. Consequently, there is no attempt in the present research to distinguish between the responses of students from differing areas.

Although Farquhar and Christensen found only modest evidence that the hypothesized cultural differences between stateside and Puerto Rican students affected motivation, no conclusions can be drawn about whether the differences actually exist today. There is the suspicion that modern communications, industrialization, mobility, an improved standard of living, and a developing educational system have erased cultural differences reported by earlier observers. It is this question to which the present study is directed.

Summary

Early cross-cultural and national character research was conducted mostly by anthropologists who used techniques suited to the study of primitive tribes rather than mass societies. Heavy reliance was placed upon personal observation, interviews, and questionnaires which were not tested for validity and reliability. Small, selected samples which were neither random nor representative were the rule. At best, results were reported in percentages and, at worst, observations were written in "best seller" style. Yet the conclusions of the researchers of the '50's were in line with the outcome of more recent, sophisticated studies.

Research efforts in the past few years are characterized by better sampling techniques, more advanced statistical analyses, and a more scientific style of reporting outcome. Farquhar and Christensen's work is exemplary of current, sophisticated research involving stratified random sampling, instrument analysis, and item- and factor-analysis of the data.

The hypotheses which appear in Chapters I and III of the present study are based generally upon the earlier research and specifically upon Farquhar and Christensen's work.

CHAPTER III

DESIGN OF THE STUDY

The study was designed to test certain assumptions about the differences and similarities in attitudes and personality between students in the insular Puerto Rican culture and students in the continental United States culture as well as between males and females within each culture.

Sample

The population from which the sample was drawn consisted of Puerto Rican and Stateside eleventh grade public school students. While the whole island population was sampled by Farquhar and Christensen in Puerto Rico, the United States sample used in this study was taken only from southwestern Michigan. Drawing the stateside sample from this particular Michigan region was a matter of economic consideration. The study was conducted with no outside financial support.

In both cultures, the population was stratified into two subpopulations, rural and urban. One metropolitan

area in excess of 300,000 residents was included in the urban sub-population of each culture. Four smaller urban areas in Puerto Rico and one smaller urban region in Michigan made up the remainder of the urban sub-population. The 1960 census classified approximately 26 percent of Michigan residents and 67 percent of Puerto Rican residents as rural. Further stratification was deemed unnecessary because Farquhar and Christensen's¹ research revealed no appreciable differences in the responses of students in different geographical sub-populations of Puerto Rico.

The research instrument was administered to about 7000 Puerto Rican students and 800 Michigan students. The Puerto Rican sample used in this study was drawn from Farquhar and Christensen's data. Because the Michigan group was much smaller, care was taken to make it as representative as possible. Of the 800 students, eight percent were Negro, approximating the nation-wide percentage of 11.5 percent. Approximately one-half of the Michigan urban students tested resided in the central part of the city, the other one-half being more suburban. All students in each school were tested in order that no uncontrolled selection factors would bias the sample. See Table 3.1 for the total number of students tested in each of the subpopulations.

¹W. W. Farquhar and E. W. Christensen, op. cit.

TABLE 3.1.--Actual Number of Students Tested in Each Subpopulation and Number of Students Drawn for Sample

Subpopulation	Total Tested	Drawn for Sample
Puerto Rican Urban	3276	132
Puerto Rican Rural	4486	268
Michigan Urban	604	296
Michigan Rural	<u>187</u>	<u>104</u>
Total	8553	800

From the total number of students tested, two stratified, random samples of 400 each were drawn. The first sample of 400 was used as a validation sample, and the second sample of 400 was used for cross-validation. Each of the two samples consisted of 100 U. S. males, 100 U. S. females, 100 Puerto Rican males and 100 Puerto Rican females. From each school tested, equal numbers of males and females were drawn for each sample. See Tables 3.1 and 3.2 for a summary of the sample size for each subclassification. The sample of 800 was used in all analyses throughout the study.

Instrumentation consisted of items from three of the scales developed by Farquhar and Christensen in their Puerto Rican study.² The total test battery administered in Puerto Rico consisted of two major segments: 1) the M-Scales developed by Farquhar³ to study the motivational

²W. W. Farquhar and E. W. Christensen, op. cit.

³W. W. Farquhar, op. cit.

factors underlying academic achievement of United States students, and 2) the P-Scales developed by Farquhar and Christensen to examine non-intellective factors in academic motivation of Puerto Rican students.

TABLE 3.2.--Summary of Sample Size for Each Sub-classification
Total N = 800

		Validation	Cross- Validation
Males	Puerto Rico	100	100
	Michigan	100	100
Females	Puerto Rico	100	100
	Michigan	<u>100</u>	<u>100</u>
Total		400	400

The M-Scales consist of four different scales: Word Rating List (WRL), Generalized Situational Choice Inventory (GSCI), Human Trait Inventory (HTI), and Preferred Job Characteristics Scale (PJCS). The P-Scales consist of new items added to the GSCI and the HTI plus a new scale, the Scale of Individual Preferences (IPS). Only the new items and the IPS (P-Scales) were administered in Michigan. A cross-cultural analysis of responses to the M-Scales was conducted by Farquhar and Christensen. Consequently, responses to the P-Scales are the only concern in the present investigation. As discussed in Chapter I, the items were constructed around five dimensions: authority relationships,

attitude toward the opposite sex, attitude toward work, implicit world view and general personality development. The same form was administered to Michigan males and females; separate forms were administered to Puerto Rican males and females.⁴

Scale of Individual Preferences (IPS)

The IPS consisted of 120 items for Puerto Rican males and Michigan students and 115 items for Puerto Rican females. Each item was a statement such as, "You must cheat in order to win," or, "We must believe that which is taught to us." The student was instructed to mark each statement on a four-point scale (1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree).

Generalized Situational Choice Inventory (GSCI)

The GSCI administered to Puerto Rican students contained 60 items for males and 45 items for females of which 15 items were new for both forms. Only the 15 new items were administered in Michigan. Each item consisted of a forced choice pair such as "I would prefer to: 1) receive orders, or 2) give orders." The student was instructed to choose the statement he would most prefer or like to do.

⁴For complete copies of each scale, see W. W. Farquhar and E. W. Christensen, op. cit., pp. 88-213.

Human Trait Inventory (HTI)

The HTI contained 112 male items and 111 female items in the Spanish version. The form administered in Michigan consisted of 87 items for males and females. Again each item was a statement which the student marked on a four-point scale (1=never, 2=sometimes, 3=usually, 4=always).

Reliability of Scales

Using Hoyt's Analysis of Variance technique, reliability estimates were computed for each sub-test (Individual Preference Scale, Generalized Situational Choice Inventory, and Human Trait Inventory) for each sex within each culture. All items were included for each scale. The reliability coefficients for each sub-test are presented in Table 3.3 by sex and culture. The reliability of the Individual Preference Scale (ranging from .80 to .94) and the Human Trait Inventory (ranging from .78 to .94) was satisfactory. The reliability of the Generalized Situational Choice Inventory was quite low (.08 to .53), possibly because it contained only fifteen items. As there is no formula for correcting for length when using Hoyt's method, it is not possible to assess the potential effect of having a greater number of items on the GSCI. The somewhat higher reliabilities for the Puerto Rican samples may have been the result of the

instruments' being specifically designed for Puerto Rican students.

TABLE 3.3.--Sub-test Reliability* for Males and Females
in Michigan and Puerto Rico
(N = 200)

	Individual Preference Scale	Human Trait Inventory	Generalized Situational Choice Inventory
Michigan males	.81	.78	.12
Michigan females	.80	.79	.08
Puerto Rican males	.91	.94	.53
Puerto Rican females	.94	.89	.48

*Hoyt's Analysis of Variance Method

Testable Hypotheses

The following null and directional hypotheses were established to test whether items in the experimental battery (P-Scales) discriminated between cultures and between sexes within each culture.

H_{01} : no disproportionality exists in the responses of Puerto Rican male students and Michigan male students to items designed to measure attitudes and personality development.

H_{a1} : disproportionality exists in the responses of Puerto Rican male students and Michigan male

students to items designed to measure attitudes and personality development in the direction indicated in Table 3.4.

- H_{02} : no disproportionality exists in the responses of Puerto Rican female students and Michigan female students to items designed to measure attitudes and personality development.
- H_{a2} : disproportionality exists in the responses of Puerto Rican female students and Michigan female students to items designed to measure attitudes and personality development in the direction indicated in Table 3.4.
- H_{03} : no disproportionality exists in the responses of Michigan male students and Michigan female students to items designed to measure attitudes and personality development.
- H_{a3} : disproportionality exists in the responses of Michigan male students and Michigan female students to items designed to measure attitudes and personality development in the direction indicated in Table 3.4.
- H_{04} : no disproportionality exists in the responses of Puerto Rican male students and Puerto Rican female students to items designed to measure attitudes and personality development.
- - -

TABLE 3.4.--Modal Expectancy of Relationship of Puerto Rican and Michigan Cultures to Five Areas for Males and Females

Area		Michigan		Puerto Rican	
		Males	Females	Males	Females
I	<u>Authority Relations</u> Authoritarian orientation	Negative	Negative	Positive	Positive
II	<u>Sex Role</u> Attitude toward the opposite sex	View as Academic Equal	View as Academic Equal	View as Inferior Species	View as Inferior Species
III	<u>Work Orientation</u> Value held of hard work	High	High	Medium	Medium
	Value of initiative and independence	High	Medium	Medium	Low
IV	<u>Implicit World View</u> Value of academic achievement	High	High	Medium	Medium
	Source of success	Self	Self	Others	Others
V	<u>Personality</u> Withdrawal	Low	Low	Low	High
	Reality-testing	High	High	Medium	Low
	Inner-directedness	Medium	Low	Low	Low
	Long-term goals	High	High	Low	Low

H_{a4}: disproportionality exists in the responses of Puerto Rican male students and Puerto Rican female students to items designed to measure attitudes and personality development in the direction indicated in Table 3.4.

Items which discriminated between cultures and/or sexes within each culture were subjected to factor analysis.

Hypothesis: The responses of Puerto Rican and Michigan students will yield an interpretable structure emphasizing the five areas which appear in Table 3.4.

Analysis

The data were subjected to two major types of statistical analysis: 1) estimates of the discriminatory value of items, and 2) factor analysis of items which remained after cross-validation.

Item Analysis

Each item in the experimental battery (P-Scales) was analyzed by the chi square model. Responses of students by sex and culture to various response combinations were entered in two-by-four contingency tables. That is, responses of males were compared with responses of females in each culture, and responses of stateside males were compared with responses of Puerto Rican males as well as

stateside females with Puerto Rican females. Sexes were compared only within cultures.

With the exception of the Generalized Situational Choice Inventory (GSCI), four alternative choices were possible for each item. Farquhar and Christensen⁵ found that Puerto Rican students had a tendency to collapse categories and that a comparison of alternative 1 and 2 with 3 and 4 was not always possible. Consequently, to gain maximum information from the data, a variable analysis was conducted in which all response combinations were compared. Because only two responses were possible on the GSCI, two-by-two contingency tables were used for this instrument.

A one-tailed test of significance was applied with alpha set at .20 for inclusion or exclusion of items. In addition to the statistical analysis, each contingency table was inspected for 1) the direction of the difference and 2) for spuriously inflated chi squares due to unusually low cell frequencies. Only those items which cross-validated were retained for further study.

Factor Analysis

Items which remained after cross-validation were subjected to factor analysis. Four separate analyses were

⁵W. W. Farquhar and E. W. Christensen, op. cit., p. 28.

conducted: 1) U. S. male - U. S. female, 2) Puerto Rican male - Puerto Rican female, 3) U. S. male - Puerto Rican male, and 4) U. S. female - Puerto Rican female. The purpose of the factor analysis was to define the structure of the cultural complex being studied. The principal axis solution for factoring a matrix was applied. Factors with a sum of squares in excess of one were rotated using the quartimax method. Rotation was continued until 1) at least $f-1$ (f being the number of factors) items loaded on all factors, and 2) the resultant factors made psychological sense. The only assumption required for factoring a matrix is that the total intercorrelation variance can be divided into independent sets.

Data Collection Procedures

The experimental instruments were administered in Puerto Rico in the fall of 1965 under the auspices of the U. S. Office of Education, Project No. 2603A and B.⁶ The Michigan sample was tested in February of 1968.

In each of the three participating Michigan schools, students were tested in groups approximating thirty and were proctored by teachers. Prior to the administration of the instruments, a meeting was held with the teachers to review procedure. The answer sheets of non-cooperative

⁶W. W. Farquhar and E. W. Christensen, op. cit.

students were separated at the end of the testing period and excluded from the sample.

Summary

The hypotheses of the study were an expression of certain assumptions about the differences and similarities in attitudes and personality development between students in the Puerto Rican culture and students in the United States culture as well as between males and females within each culture. The hypotheses were tested using three experimental instruments (Scale of Individual Preferences, Generalized Situational Choice Inventory, and Human Trait Inventory) with a stratified random sample of Michigan and Puerto Rican eleventh graders. Hoyt's Analysis of Variance Method was used to calculate reliability estimates for each of the three scales by sex and culture. Reliabilities ranged from .80 to .94 on the Individual Preference Scale, .78 to .94 on the Human Trait Inventory, and .08 to .52 for the Generalized Situational Choice Inventory. Statistical analysis included using chi square to select discriminating test items and factor analysis to describe the structure of the cultural complex being studied.

CHAPTER IV

ANALYSIS OF RESULTS

The outcome of the study consists of two categories of information: 1) individual test items which discriminate between cultures and/or between sexes within each culture, and 2) factors which define the structure of the cultural complex being studied. The results of both the item analysis and the factor analysis are presented for each of four comparisons: 1) Michigan males with Puerto Rican males, 2) Michigan females with Puerto Rican females, 3) Michigan males with Michigan females, and 4) Puerto Rican males with Puerto Rican females.

Item Analysis

A one-tailed chi square test with alpha set at .20 was applied to each of the 222 test items to determine its discriminatory value. Only those items with significant chi square values for both the validation and cross-validation samples were retained. The chi square values for each test item are reproduced in Appendix A.

Michigan Males - Puerto Rican Males

The null and alternate hypotheses tested were:

H_{01} : no disproportionality exists in the responses of Puerto Rican male students and Michigan male students to items designed to measure attitudes and personality.

H_{a1} : disproportionality exists in the responses of Puerto Rican male students and Michigan male students to items designed to measure attitudes and personality in the direction predicted by theory or past studies (supra - Chapter I).

The Scale of Individual Preferences yielded 89 significant items which discriminated between Michigan males and Puerto Rican males. The Generalized Situational Choice Inventory contained six significant items. The Human Trait Inventory had 69 significant items. For the three instruments combined, a total of 164 items were found to discriminate between males in the two cultures.

Michigan Females - Puerto Rican Females

The null and alternate hypotheses tested were:

H_{02} : no disproportionality exists in the responses of Puerto Rican female students and Michigan female students to items designed to measure attitudes and personality.

H_{a2} : disproportionality exists in the responses of Puerto Rican female students and Michigan female students to items designed to measure attitudes and personality in the direction indicated by theory and past studies (supra - Chapter I).

The Scale of Individual Preferences contained 77 significant items. The Generalized Situational Choice Inventory had six items which were significant. The Human Trait Inventory yielded 77 significant items. For the three combined scales, a total of 160 items significantly discriminated between females of the two cultures.

Michigan Males - Michigan Females

The null and alternate hypotheses tested were:

H_{o3} : no disproportionality exists in the responses of Michigan male students and Michigan female students to items designed to measure attitudes and personality.

H_{a3} : disproportionality exists in the responses of Michigan male students and Michigan female students to items designed to measure attitudes and personality in the direction indicated by theory and past studies (supra - Chapter I).

The Scale of Individual Preferences yielded 29 items that significantly discriminated between Michigan males and Michigan females. The Generalized Situational

Choice Inventory had just one significant item. The Human Trait Inventory yielded 36 significant items. The three scales combined had a total of 80 significant items which discriminated between males and females in Puerto Rico.

A summary of significant items by instrument and by the samples being compared appears in Table 4.1. These items only were subsequently used for factor analysis.

TABLE 4.1.--Summary of Significant Items Yielded by Chi Square Analysis

	Original Number of Items	Puerto Rican - Michigan Males	Puerto Rican - Michigan Females	Michigan Males - Females	Puerto Rican Males - Females
IPS*	120	89	77	29	43
GSCI*	15	6	6	2	1
HTI*	<u>87</u>	<u>69</u>	<u>77</u>	<u>16</u>	<u>36</u>
Total	222	164	160	47	80

*IPS = Scale of Individual Preferences

GSCI = Generalized Situational Choice Inventory

HTI = Human Trait Inventory

Factor Analysis

Each of the four sets of significant items (Table 4.1) was factor analyzed to define the structure of the cultural complex being studied. As specified in Chapter III, the principal axis solution for factoring a

matrix was applied. Using the quartimax method, rotation was continued until 1) at least $f-1$ (f being the number of factors) items loaded on all factors, and 2) the resultant factors made psychological sense. The hypothesis tested was:

Hypothesis: The responses of Puerto Rican and Michigan students will yield an interpretable structure emphasizing the five areas which appear in Table 3.4 (supra Chapter III).

Michigan Male - Puerto Rican Male Factors

Five factors were identified from items which discriminated between Michigan males and Puerto Rican males. The experimental test source, items, scoring direction and factor loadings are summarized in Tables 4.2 through 4.6. The directionality of each factor, that is, whether it typifies one sample or the other, is discussed later in Chapter IV under, "Factor Interpretation Related to Hypotheses."

Factor I Fifty-six items loaded heaviest on the first Michigan male - Puerto Rican male factor. Nearly all of the items were drawn from the IPS. The factor described a person who does not like school and whose parents discourage him from continuing in school. The factor was labeled parental pressure.

Table 4.2.--Factor I Items and Loadings Michigan Male and Puerto Rican Male

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
108	80	IPS	-	My mother wants me to quit school but my father wants me to continue.	.6394
101	74	IPS	-	My parents believe that education is only for rich people.	.5796
103	75	IPS	-	My father wants me to quit school but my mother wants me to continue.	.5768
73	52	IPS	-	The outstanding student is usually slow.	.5751
105	77	IPS	-	My parents think that it is more important for my brothers and sisters to receive an education than me.	.5732
91	66	IPS	-	I wish I had the courage to tell my parents I do not like school.	.5652
46	31	IPS	-	My parents don't care if I finish my schooling.	.5591

*A plus indicates that Michigan males responded more favorably to the item than Puerto Rican males; a minus indicates Michigan males responded less favorably to the item than did Puerto Rican males.

Table 4.2.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
77	55	IPS	-	I don't argue because I know I won't win.	.5564
67	47	IPS	-	School is for girls; boys can't feel comfortable in it.	.5547
10	7	IPS	-	Nobody should do more than that which is asked of him.	.5420
96	69	IPS	-	No matter how hard I try, I won't have much chance of passing the grade if I'm not lucky.	.5263
97	70	IPS	-	It wouldn't matter if I turn in someone else's work if the teacher demands more than I can do.	.5141
52	35	IPS	-	My parents would prefer that I find a good job rather than continue studying.	.5131
100	73	IPS	-	My parents worry about us not being as close as before if I continue my education.	.4944
79	57	IPS	-	Intelligent people do not get involved in arguments.	.4927

Table 4.2.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
28	18	IPS	-	That which is true must also be beautiful.	.4812
87	63	IPS	-	I prefer to stay out of argu- ments if there is a possibility of losing.	.4746
43	28	IPS	-	You must go abroad if you desire a good education.	.4705
86	62	IPS	-	I have to quit school so my younger brothers and sisters can obtain the education that they need.	.4646
29	19	IPS	-	The most important thing in life is to know what comes next.	.4439
35	24	IPS	-	We must believe that which is taught to us.	.4427
85	61	IPS	-	It is more advantageous to keep your mouth shut in school.	.4416
60	41	IPS	-	You must cheat in order to win.	.4378
59	40	IPS	-	It is justifiable that a hungry and unemployed man rob, cheat or beg.	.4322

Table 4.2.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
65	45	IPS	-	Women don't have to study as much as men to obtain high grades.	.4264
93	67	IPS	-	When things get serious, it is better to become inconspicuous.	.4213
99	72	IPS	-	Obtaining a high grade doesn't excite me if others obtain one too.	.4032
16	11	IPS	-	Material things are more important to me than people.	.4029
69	49	IPS	-	Times aren't as good as in the past.	.4027
22	15	IPS	-	The student that praises the teacher has more successes than those students who are truly outstanding.	.3915
116	86	IPS	-	My first impression is almost always correct.	.3843
80	58	IPS	-	The diploma is the ultimate achievement of going to the university.	.3815

Table 4.2.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
94	68	IPS	-	I think my group is very dis- organized but I can't say much about it.	.3770
31	21	IPS	-	Those who prefer work rather than play are boring.	.3700
8	6	IPS	-	The student that tries to get high grades makes the work more difficult for the rest.	.3696
78	56	IPS	-	I hate to argue with people.	.3651
83	60	IPS	-	In a country such as ours everybody has equal opportu- nities.	.3616
81	59	IPS	-	My parents do not worry when I have problems in school.	.3579
14	10	IPS	-	The objective is what counts; the ways of reaching it are of little value.	.3557
117	87	IPS	-	I will probably work less rigorously than my father.	.3530
88	64	IPS	-	With the new industrialization one can earn a living in a factory with little education.	.3518

Table 4.2.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
120	89	IPS	-	I have always been interested in the same thing.	.3478
40	27	IPS	-	By nature, man is more intelligent than woman.	.3388
110	81	IPS	+	I fear the future may not be as pleasant as the present.	.3387
33	22	IPS	-	He who is not careful about his things deserves to be robbed.	.3362
55	38	IPS	-	I resent having to answer all of these questions.	.3186
90	65	IPS	-	My parents side with the teacher when I have problems in school.	.3145
8	93	GSCI	1	1) Be a famous popular singer, or 2) Be a famous expert in classi- cal music.	.3130
13	9	IPS	-	We must be cautious when speaking frankly, for we might offend somebody that could help us in the future.	.3144

Table 4.2.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
63	43	IPS	-	Sometimes it is necessary for a man to punish his wife in order to establish his authority in the home.	.2975
54	37	IPS	-	A real man does not let a woman tell him what to do.	.2944
68	135	HTI	+	I like to persuade others to think as I do.	.2847
4	91	GSCI	1	1) Be a leader of my group of friends, or 2) Get my project selected for the science fair and win a prize	.2749
4	2	IPS	-	Adolescents have too much freedom in their dates.	.2565
64	44	IPS	-	My mother's concept of life is good enough for me.	.2369
21	14	IPS	-	The task that you try to accomplish may be so important that the minor errors would be justified.	.2006

Table 4.3.--Factor II Items and Loadings Michigan Male and Puerto Rican Male

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
62	130	HTI	-	I like to argue with people about ideas.	.6513
81	146	HTI	-	I try to achieve the best I can.	.6374
65	132	HTI	-	I constantly try to improve myself.	.6220
67	134	HTI	+	I prefer to be like I am and not like any other person.	.5979
48	120	HTI	-	I look for advice from older people.	.5814
61	129	HTI	-	I think my mother has a lot of good advice to give me about how a real woman should go about getting along well with her husband.	.5385
63	131	HTI	-	When I say I will do something I do it.	.5183
74	140	HTI	-	I think my father has a lot of good advice to give me about how to raise my children	.5157
80	145	HTI	-	I volunteer if the teacher makes us read.	.5065

Table 4.3.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
41	115	HTI	-	I prefer studying to doing nothing.	.5017
45	118	HTI	+	I can solve any problems if I have enough time.	.4990
52	123	HTI	-	People think that I don't fight for my rights, but in the end I get what I want.	.4960
40	114	HTI	-	I think my mother has a lot of good advice to offer about how to get ahead in life.	.4917
84	148	HTI	-	I put off my decisions until I have all the information.	.4888
32	107	HTI	-	My parents like me to read a lot.	.4755
60	128	HTI	-	I like for people to express their beliefs and then prove them wrong.	.4661
23	102	HTI	-	My parents make sure I do my school work.	.4646
87	151	HTI	-	My father has a lot of good advice to give me about how to get ahead in life.	.4517

Table 4.3.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
89	153	HTI	-	I deserve what I have.	.4481
34	109	HTI	-	I am the kind of person who doesn't let others take advantage of him.	.4430
88	152	HTI	-	Winning is the most important thing.	.4373
47	119	HTI	-	To me it is more important to tell the truth than to avoid hurting others' feelings.	.4351
39	113	HTI	-	Even when I get tired of a job, I always finish it.	.4220
71	137	HTI	-	I think my father has a lot of good advice to give me about how to raise my children.	.4139
77	142	HTI	-	I like to read.	.3945
95	158	HTI	+	In a country like ours, everybody has the same choice.	.3837
72	138	HTI	-	I would resent having to leave school to help my family.	.3603

Table 4.3.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
37	112	HTI	+	I feel well enough to keep up with the good students.	.3466
53	124	HTI	-	If I just put my mind to it, I could be much more successful in school than I am now.	.3397
35	110	HTI	-	I answer questions rapidly and almost always am correct.	.3110
24	103	HTI	-	I wish my parents would worry more about what I do in school.	.3042
11	8	IPS	+	I feel that I can contribute something to the people of my community.	.3016
70	136	HTI	+	I try harder to win if I have a bet.	.2861
33	108	HTI	-	I have friends who can always get me some job.	.2850
85	149	HTI	-	I like to do what the group does.	.2627
36	111	HTI	+	I have the energy to do what my teacher expects me to do.	.2588

Table 4.3.--Continued

Test Item Number	Print-out Number	Item	Mich. Male Scoring Direction	Item	Loading
17	12	IPS	-	A new student in high school should win the esteem of the staff in his school as soon as possible.	.2409

Table 4.4.--Factor III Items and Loadings Michigan Males and Puerto Rican Males

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
98	161	HTI	+	My friends make me do things with them that I really don't want to do.	.5357
78	143	HTI	-	I am the kind of person people think they can take advantage of.	.5222
58	127	HTI	-	I am too tired to study.	.5109
90	154	HTI	-	People who succeed in life are those from rich families.	.4878
96	159	HTI	-	I go places that really don't interest me much just to be with the people.	.4739
91	155	HTI	+	School work is boring because it does not deal with important problems.	.4639
83	147	HTI	-	I prefer to bet on the achievements of other people and not on my own.	.4596
28	104	HTI	-	I pretend to not like school so my friends won't make fun of me.	.4564

Table 4.4.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
86	150	HTI	-	When one visits in another city, it is alright to visit friends before the family.	.4340
57	126	HTI	-	You can get what you want by playing dumb.	.4240
50	122	HTI	-	I go along with my friends in criticizing the teacher, but I am really not in agreement with them.	.4113
79	144	HTI	-	During a test, I would ask any friend the answer to an important question.	.4032
93	156	HTI	-	I dream of winning a great deal of money.	.3887
101	163	HTI	-	It is better to give in than be rejected by your friends.	.3821
100	163	HTI	-	I act as if I like school more than I really do.	.3806
19	99	HTI	-	I would like people to fear me to such a point that no one would dare deny my requests.	.3617

Table 4.4.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
73	139	HTI	-	I tend to not question ideas that people whom I respect suggest.	.3556
54	125	HTI	-	I am the kind of person who can't wait for things.	.3555
102	164	HTI	-	It is difficult to belong to the group and get good grades.	.3550
97	160	HTI	+	I wish my parents were rich.	.3517
16	96	HTI	-	When I get tired of a job, I leave it as soon as I can.	.3216
21	100	HTI	+	I envy people who have advanta- gious social connections.	.3112
94	157	HTI	+	When vacations are about over, I can hardly wait for classes to begin again.	.2789
43	117	HTI	-	It is difficult for me to concentrate while I study.	.2772
66	133	HTI	-	I would rather talk about people than ideas.	.2678

Table 4.4.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
42	116	HTI	-	My energy level seems to be much lower than others.	.2671
22	101	HTI	-	Sometimes I am compared with young people in my neighborhood who have gone to the university.	.2637
49	121	HTI	+	I live for the present, the future will take care of itself.	.2320
17	97	HTI	-	I don't know what to believe about something until I speak with someone about it.	.2262

Table 4.5.--Factor IV Items and Loadings Michigan Males and Puerto Rican Males

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
119	88	IPS	-	My parents want me to go as far in school as my abilities will permit.	.5425
98	71	IPS	-	In my family, it is understood that all children must be educated.	.5271
107	79	IPS	-	Intelligent people do not get involved in arguments.	.5264
115	85	IPS	+	My parents would be disappointed if I did not attend school.	.4669
38	26	IPS	-	As of today, it is difficult to become somebody without an education.	.4651
104	76	IPS	+	My future depends on my success in school.	.4498
113	83	IPS	+	My parents will be disappointed with me if I don't finish at least high school.	.4229
68	48	IPS	-	Anybody can achieve outstanding grades if they set their minds to it.	.4137

Table 4.5.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
74	53	IPS	+	It is always wise to do more than that which the teacher expects of the student.	.4093
51	34	IPS	-	There is no such thing as "luck"; to win (or achieve) you must work very hard.	.4000
37	25	IPS	-	Anything worth starting is worth finishing.	.3928
112	82	IPS	-	In order to achieve something important one must go through hard times.	.3883
66	46	IPS	-	It is more important to have a good education than a good job.	.3813
61	42	IPS	-	I like to think of the answers to questions such as these.	.3709
106	78	IPS	+	The lazy person hides behind his "bad luck" to justify not helping himself.	.3507
47	32	IPS	-	Working is more important than winning games.	.3377

Table 4.5.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
5	3	IPS	-	A good way to personal power is through school.	.3155
71	50	IPS	-	To enter the university and later interrupt your studies without obtaining a degree is a waste of money and time.	.2533
44	29	IPS	+	I hope to be as good a father (or mother) to my children as my father is to me.	.2383
7	5	IPS	-	I go to school because I want to learn.	.2355
53	36	IPS	+	It is better to work than to receive welfare from the government even though it may mean less income.	.2148
45	30	IPS	+	To be great a country must develop its intellectual potential.	.2011
30	20	IPS	-	The idleness of some surprises me.	.1740
34	23	IPS	-	I prefer to be known as a good parent rather than as an intellectual.	.1366

Table 4.6.--Factor V Items and Loadings Michigan Males and Puerto Rican Males

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
75	54	IPS	+	Sometimes it is dangerous to win an argument.	.5005
58	39	IPS	+	If I wanted to make enough money to buy a brand new car, I could do it.	.4843
26	17	IPS	+	I go to school so I can meet other young people.	.4630
29	105	HTI	+	The most important thing in life is to know what comes next.	.4163
6	4	IPS	-	I must help my parents as soon as possible.	.4033
48	33	IPS	+	Frequently people don't understand my explanations.	.3978
72	51	IPS	+	In our school the students must take care of themselves because the teachers don't.	.3786
11	94	GSCI	2	1) Be poor but honest, or 2) Be rich but necessarily shrewd.	.3645

Table 4.6.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
114	84	IPS	+	I fear I may never achieve all the things I want to do.	.3500
31	106	HTI	-	My mother objects to my studying when there is work to be done around the house.	.3221
1	1	IPS	+	People interest me more than ideas.	.3059
20	13	IPS	-	To obtain the highest grades you have to be on good terms with the teacher.	.2721
1	90	GSCI	2	1) Be poor but more loved by my family, or 2) Be richer but less loved by my family.	.2564
12	95	GSCI	2	1) Believe in that which makes me happy although it is not true, or 2) Know the truth even though it makes me unhappy.	.2302
25	16	IPS	-	It is difficult to take an interest in school when my family needs my help.	.1493
18	98	HTI	-	I like to write letters.	.1473

Factor II Thirty-seven items, mostly from the HTI, loaded heaviest on the second factor. The items described a person who is trying to improve himself and his achievement, partially by seeking advice from his elders. Factor II was named extrinsic versus intrinsic achievement.

Factor III Twenty-nine items loaded heaviest on the third factor, all of which were from the HTI. The factor description was of a person who is other-oriented, who subjugates his own interests to the wishes of friends in order to maintain relationships. Factor III was labeled social orientation.

Factor IV Twenty-four items loaded heaviest on Factor IV, all drawn from the IPS. The theme of the factor was an expression of parental attitudes toward education, e.g., going as far in school as possible. Factor IV was named parental valuing.

Factor V Sixteen items loaded heaviest on the fifth Michigan male - Puerto Rican male factor. The items were about equally distributed among the IPS, HTI, and GSCI. The theme of the items was an expression of anxiety and concern over various kinds of interpersonal contacts, e.g., arguing. Factor V was labeled social interaction.

TABLE 4.7.--Labels and Descriptions for Five Michigan Male - Puerto Rican Male Factors

Factor Label		Factor Description
Factor I	Parental pressure	Describes a person who does not like school and whose parents discourage him from continuing his education. Most typical of Puerto Rican males.
Factor II	Extrinsic vs. intrinsic achievement	Describes a person who is trying to improve himself and his achievement, partially by seeking advice from older people. A Puerto Rican male response.
Factor III	Social orientation	Describes a person who subjugates his own interests to the wishes of friends <u>other-oriented</u> . Typifies Puerto Rican males.
Factor IV	Parental valuing	Contains an expression of parental attitudes toward education, all of a positive nature. The counterpart of Factor I. A Michigan male response.
Factor V	Social interaction	An expression of anxiety over various kinds of interpersonal contacts, e.g., arguing. Characteristic of Michigan males.

Summary Interpretations of Michigan
Male - Puerto Rican Male Factors

The five factors which were identified in the cross-cultural comparison of Michigan males with Puerto Rican males are listed and given summary interpretations in Table 4.7.

Michigan Female - Puerto Rican Female Factors

Seven factors emerged from the items which discriminated between Michigan females and Puerto Rican females. The experimental test source, items, scoring direction and factor loadings are summarized in Tables 4.8 through 4.14. The directionality of each factor, that is, whether it typifies one sample or the other, is discussed later in Chapter IV under, "Factor Interpretation Related to Hypotheses."

Factor I Forty-five items loaded heaviest on the first Michigan female - Puerto Rican female factor. Nearly all were HTI items. The factor described a person who identifies with her mother and who seeks advice from her. Three items with loadings above .5000 suggested a passive aggressive trait linked with the mother identification. Factor I was labeled maternal pressure.

Factor II Thirty-nine items loaded heaviest on Factor II; all but one were IPS items. The content of the factor

consisted of parental discouragement of education. The student sees little chance of success and responds passively. Responsibility for success or failure is perceived as beyond the student's control. The factor was called educational destiny.

Factor III Twenty HTI items loaded heaviest on the third factor. The items described a person who makes concessions of personal interest to placate friends. This factor was very similar in content to Factor III for Michigan males and Puerto Rican males and was given the same label of social orientation.

Factor IV Thirteen items, drawn primarily from the IPS, loaded heaviest on Factor IV. The theme of the factor was that of working hard to achieve something important. The label given Factor IV was work orientation.

Factor V Twenty-four items loaded heaviest on the fifth factor; most of them were drawn from the IPS. The items delineated a person who is very responsive to authority. Idealism is evident, and there is an indication of withdrawal as a behavioral response to authority. Factor V was labeled authority relations.

Factor VI Seven items loaded heaviest on Factor VI, four from the HTI, two from the IPS, and one from the GSCI. The

Table 4.8.--Factor I Items and Loadings Michigan Female and Puerto Rican Female

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction*	Item	Loading
88	148	HTI	-	Winning is the most important thing.	.6532
61	122	HTI	-	I think my mother has a lot of good advice to give me about how a real woman should go about getting along well with her husband.	.6167
52	113	HTI	-	People think that I don't fight for my rights, but in the end I get what I want.	.6162
40	103	HTI	-	I think my mother has a lot of good advice to offer about how to get ahead in life.	.5980
48	110	HTI	-	I look for advice from older people.	.5747
33	97	HTI	-	I have friends who can always get me a job.	.5577
62	123	HTI	-	I like to argue with people about ideas.	.5414

*A plus indicates that Michigan females responded more favorably to the item than Puerto Rican females; a minus indicates that Michigan females responded less favorably than Puerto Rican females.

Table 4.8.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
30	94	HTI	-	My parents consult my teachers about my school work.	.5347
46	108	HTI	-	I dream about having a benefactor.	.5197
6	5	IPS	-	I must help my parents as soon as possible.	.5184
69	130	HTI	-	I think my mother has a lot of good advice to give me about how to raise my children.	.4948
73	134	HTI	-	I tend to not question ideas that people whom I respect suggest.	.4858
41	104	HTI	-	I prefer studying to doing nothing.	.4973
24	90	HTI	-	I wish my parents would worry more about what I do in school.	.4701
56	117	HTI	-	My friends can't understand why I am so interested in school.	.4597
23	89	HTI	-	My parents make sure I do my school work.	.4526

Table 4.8.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
35	99	HTI	-	I answer questions rapidly and always am correct.	.4419
32	96	HTI	-	My parents like me to read a lot.	.4367
45	107	HTI	-	I can solve any problems if I have enough time.	.4313
22	88	HTI	-	Sometimes I am compared with young people in my neighbor- hood who have gone to the university.	.4293
80	140	HTI	-	I volunteer if the teacher makes us read.	.4274
101	159	HTI	-	It is better to give in than be rejected by your friends.	.4238
64	125	HTI	-	It bothers me for people to be so critical.	.4182
100	158	HTI	-	I act as if I like school more than I really do.	.4108
89	149	HTI	-	I deserve what I have.	.4086

Table 4.8.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
60	121	HTI	-	I like for people to express beliefs and then prove them wrong.	.4026
25	91	HTI	-	You have to follow the group whether you like it or not.	.3955
47	109	HTI	-	To me it is more important to tell the truth than to avoid hurting others' feelings.	.3943
70	131	HTI	-	I try harder to win if I have a bet.	.3741
67	128	HTI	-	I prefer to be like I am and not like any other person.	.3676
50	112	HTI	-	I go along with my friends in criticizing the teacher, but I am really not in agreement with them.	.3633
34	98	HTI	-	I am the kind of person who doesn't let others take advantage of him.	.3616
1	1	IPS	+	People interest me more than ideas.	.3404

Table 4.8.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
102	160	HTI	-	It is difficult to belong to the group and get good grades.	.3050
26	17	IPS	+	I go to school so I can meet other young people.	.2929
17	85	HTI	-	I don't know what to believe about something until I speak with someone about it.	.2877
95	154	HTI	-	In a country like ours, everybody has the same choice.	.2841
94	153	HTI	-	When vacations are about over, I can hardly wait for classes to begin again.	.2772
53	30	IPS	+	It is better to work than to receive welfare from the government even though it may mean less income.	.2726
83	143	HTI	-	I prefer to bet on the achievements of other people and not my own.	.2677
31	95	HTI	-	My mother objects to my studying when there is work to be done around the house.	.2457

Table 4.8.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
8	82	GSCI	1	1) Be a famous popular singer, or 2) Be a famous expert in class- ical music.	.2277
18	86	HTI	-	I like to write letters.	.2153
38	101	HTI	-	It bothers me to sit quietly and do nothing.	.2066
27	92	HTI	-	I prefer to keep a product I have bought even if it is defective before exchanging it in the store.	.1493

Table 4.9.--Factor II Items and Loadings Michigan Female and Puerto Rican Female

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
96	61	IPS	-	No matter how hard I try, I won't have much chance of passing the grade if I'm not lucky.	.6504
108	68	IPS	-	My mother wants me to quit school but my father wants me to continue.	.6455
103	64	IPS	-	My father wants me to quit school but my mother wants me to continue.	.5944
91	56	IPS	+	I wish I had the courage to tell my parents I do not like school.	.5914
86	51	IPS	-	I have to quit school so my younger brothers and sisters can obtain the education that they need.	.5649
111	71	IPS	-	Most of what one must do to obtain high grades is not very important.	.5538
52	29	IPS	-	My parents would prefer that I find a good job rather than continue studying.	.5224

Table 4.9.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
77	43	IPS	-	I don't argue because I know I won't win.	.5202
94	59	IPS	-	I think my group is very disorganized but I don't say much about it.	.5189
73	39	IPS	-	The outstanding student is usually slow.	.5041
95	60	IPS	-	I am really unhappy with the leader of our group, but I do not let him know.	.5013
89	54	IPS	+	My parents do not worry when I have problems in school.	.4905
84	50	IPS	-	It doesn't worry me to quit school in order to help my family.	.4814
8	7	IPS	-	The student that tries to get high grades makes the work more difficult for the rest.	.4751
99	62	IPS	-	Obtaining a high grade doesn't excite me if others obtain one too.	.4613

Table 4.9.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
59	33	IPS	-	It is justifiable that a hungry and unemployed man rob, cheat or beg.	.4604
79	45	IPS	-	Intelligent people do not get involved in arguments.	.4595
88	53	IPS	-	With the new industrialization one can earn a living in a factory with little education.	.4455
93	58	IPS	-	When things get serious, it is better to become inconspicuous.	.4317
76	42	IPS	-	The best way to dominate a "bully" is to yield to him.	.4256
32	22	IPS	-	Copying an exam is justifiable if graduation or failure depends on it.	.4227
80	46	IPS	-	The diploma is the ultimate achievement of going to the university.	.4191
100	63	IPS	-	My parents worry about us not being as close as before if I continue my education.	.4135

Table 4.9.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
55	31	IPS	-	I resent having to answer all of these questions.	.4116
116	75	IPS	-	My first impression is almost always correct.	.4023
29	20	IPS	-	The most important thing in life is to know what comes next.	.4020
81	47	IPS	-	One way to avoid getting hurt is by not getting involved with people.	.4006
3	2	IPS	-	I go to school because my parents force me to.	.3983
10	8	IPS	-	Nobody should do more than that which is asked of him.	.3982
110	70	IPS	-	I fear the future may not be as pleasant as the present.	.3769
90	55	IPS	-	My parents side with the teacher when I have problems in school.	.3737
19	14	IPS	+	A beautiful girl achieves success sooner.	.3683

Table 4.9.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
31	21	IPS	-	Those who prefer work rather than play are boring.	.3597
117	76	IPS	-	I will probably work less rigorously than my father.	.3512
14	11	IPS	-	The objective is what counts; the ways of reaching it are of little value.	.3466
72	38	IPS	+	In our school the students must take care of themselves because the teachers don't.	.3382
24	16	IPS	-	The less attention you get from the teacher, the better for you.	.2901
114	74	IPS	+	I fear I may never achieve all the things I want to do.	.2747
5	80	GSCI	1	1) Win a very large amount of money, or 2) Be a very successful professional	.2062

Table 4.10.--Factor III Items and Loadings Michigan Female and Puerto Rican Female

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
96	155	HTI	+	I go places that really don't interest me much just to be with the people.	.5140
98	157	HTI	+	My friends make me do things with them that I really don't want to do.	.5045
86	146	HTI	+	When one visits in another city it is alright to visit friends before the family.	.4810
58	119	HTI	+	I am too tired to study.	.4597
68	129	HTI	-	I like to persuade others to think as I do.	.4572
90	150	HTI	+	People who succeed in life are those from rich families.	.4468
66	127	HTI	+	I would rather talk about people than ideas.	.4210
57	118	HTI	-	You can get what you want by playing dumb.	.4187
91	151	HTI	-	School work is boring because it does not deal with impor- tant problems.	.4016

Table 4.10.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
43	105	HTI	+	It is difficult for me to concentrate while I study.	.3967
97	156	HTI	+	I wish my parents were rich.	.3959
55	116	HTI	+	I go to parties that don't interest me just to be with the group.	.3879
79	139	HTI	-	During a test, I would ask any friend the answer to an important question.	.3867
29	93	HTI	+	I play to win.	.3802
78	138	HTI	+	I am the kind of person people think they can take advantage of.	.3539
93	152	HTI	-	I dream of winning a great amount of money.	.3512
85	145	HTI	-	I like to do what the group does.	.3289
54	115	HTI	+	I am the kind of person who can't wait for things.	.2777

Table 4.10.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
44	106	HTI	+	I prefer the seats in the back of the room to those in the front.	.2723
19	87	HTI	-	I would like people to fear me to such a point that no one could dare deny my requests.	.1832

Table 4.11.--Factor IV Items and Loadings Michigan Female and Puerto Rican Female

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
112	72	IPS	+	In order to achieve something important one must go through hard times.	.4965
11	9	IPS	-	I feel that I can contribute something to the people of my community.	.4465
45	26	IPS	+	To be great a country must develop its intellectual potential.	.4354
58	32	IPS	+	If I wanted to make enough money to buy a brand new car, I could do it.	.4076
75	41	IPS	+	Sometimes it is dangerous to win an argument.	.3371
48	28	IPS	+	Frequently people don't understand my explanations.	.3241
106	66	IPS	+	The lazy person hides behind his "bad luck" to justify not helping himself.	.3216
27	18	IPS	+	Having success in school often means being lonely.	.3044

Table 4.11.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
107	67	IPS	-	My parents are willing to sacrifice as much as possible to pay for my education.	.3024
49	111	HTI	-	To really win you must compete with another person.	.2235
16	84	IPS	-	Material things are more important to me than people.	.1933
109	69	IPS	-	Praying will not solve everything; one must work hard.	.1733
23	15	IPS	+	The people around me get too excited about any little thing.	.1530

Table 4.12.--Factor V Items and Loadings Michigan Females and Puerto Rican Females

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
35	24	IPS	-	We must believe that which is taught us.	.5286
68	35	IPS	-	Anybody can achieve outstand- ing grades if they set their minds to it.	.4573
13	10	IPS	-	We must be cautious when speaking frankly, for we might offend somebody that could help us in the future.	.4474
74	40	IPS	-	It is always wise to do more than that which the teacher expects of the student.	.4231
87	52	IPS	-	I prefer to stay out of arguments if there is a possi- bility of losing.	.4193
83	49	IPS	-	In a country such as ours everybody has equal opportu- nities.	.4017
28	19	IPS	-	That which is true must also be beautiful.	.4013
47	27	IPS	-	Working is more important than winning games.	.3994

Table 4.12.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
17	13	IPS	-	A new student in high school should win the esteem of the staff in his school as soon as possible.	.3987
82	48	IPS	-	I have known for some time the occupation I would like to follow.	.3810
66	34	IPS	-	It is more important to have a good education than a good job.	.3748
7	6	IPS	-	I go to school because I want to learn.	.3732
104	65	IPS	-	My future depends on my success in school.	.3714
5	4	IPS	-	A good way to personal power is through school.	.3693
41	25	IPS	-	A girl should be chaperoned by her chaperone on dates.	.3688
120	77	IPS	-	I have always been interested in the same thing.	.3534
78	44	IPS	-	I hate to argue with people.	.3460

Table 4.12.--Continued

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
71	37	IPS	-	To enter the university and later interrupt your studies without obtaining a degree is a waste of money and time.	.3389
4	79	GSCI	1	1) Be a leader of my group of friends, or 2) Get my project selected for the science fair and win a prize.	.3099
11	83	GSCI	2	1) Be poor but honest, or 2) Be rich but necessarily shrewd.	.2963
34	23	IPS	-	I prefer to be known as a good parent rather than as an intellectual.	.2689
4	3	IPS	-	Adolescents have too much freedom in their dates.	.2215
3	78	GSCI	2	1) Give the answer to another person on a test, or 2) Copy someone else's answer	.2068
53	114	HTI	+	If I just put my mind to it, I could be much more successful in school than I am now.	.1680

Table 4.13.--Factor VI Items and Loadings Michigan Females and Puerto Rican Females

Test Item Number	Print-out Number	Test	Mich. Females Scoring Direction	Item	Loading
71	132	HTI	-	I think my father has a lot of good advice to give me about how to raise my children.	.4860
87	147	HTI	-	My father has a lot of good advice to give me about how to get ahead in life.	.4625
74	135	HTI	-	I think my father has a lot of good advice to give me about what a real woman has to do to get along well with her husband.	.3926
16	12	IPS	-	Material things are more important to me than people.	.3531
70	36	IPS	-	My father's concept of living is good enough for me.	.3407
72	133	HTI	-	I would resent having to leave school to help my family.	.3264
7	81	GSCI	1	1) Be a famous sports figure, or 2) Be a famous scientist.	.2950

Table 4.14.--Factor VII Items and Loadings Michigan Females and Puerto Rican Females

Test Item Number	Print-out Number	Test	Mich. Female Scoring Direction	Item	Loading
81	141	HTI	-	I try to achieve the best I can.	.5942
36	100	HTI	-	I have the energy to do what my teacher expects of me.	.4902
75	136	HTI	+	I like the idea of being a member of my sex.	.4822
82	142	HTI	-	I can study better when I am alone.	.4763
59	120	HTI	-	I would like to see the world.	.4315
65	126	HTI	-	I constantly try to improve myself.	.4310
63	124	HTI	+	When I say I will do something I do it.	.4139
77	137	HTI	-	I like to read.	.3583
84	144	HTI	-	I put off my decisions until I have all the information.	.3007
39	102	HTI	+	Even when I get tired of a job, I always finish it.	.2552
92	57	IPS	+	Obtaining an average grade does not excite me if others also receive one.	.2482

theme of the items was clearly one of yielding to the authority of the father by accepting his advice and his concept of living. The factor was labeled paternal pressure.

Factor VII Eleven items loaded heaviest on the seventh factor, all but one being HTI items. The factor described a person who tries to achieve and to improve herself, but who does not like the restrictions of the feminine role. Factor VII was given the label of achievement performance.

Summary Interpretations of Michigan Female - Puerto Rican Female Factors

The seven factors which emerged in the cross-cultural comparison of Michigan females with Puerto Rican females are listed and given summary descriptions in Table 4.15.

Michigan Male - Michigan Female Factors

Six factors were identified by factor analyzing the items which discriminated between Michigan males and Michigan females. The experimental test source, items, scoring direction and factor loadings are summarized in Tables 4.16 through 4.21. The directionality of each factor is discussed later in Chapter IV under, "Factor Interpretation Related to Hypotheses."

TABLE 4.15.--Labels and Descriptions for Seven Michigan Female - Puerto Rican Female Factors

Factor Label		Factor Description
Factor I	Maternal pressure	Describes a person who identifies with her mother and seeks advice from her. Most characteristic of Puerto Rican females.
Factor II	Educational destiny	Contains a theme of parental discouragement of the student's continuing her education. Student sees little chance of success. A Puerto Rican female perception.
Factor III	Social orientation	Describes a person who makes concessions of personal interest to placate friends. More typical of Puerto Rican females.
Factor IV	Work orientation	Comprises a theme of working hard to achieve something important. Characteristic of Michigan females.
Factor V	Authority relations	Describes a person who is idealistic, responsive to authority, and somewhat withdrawn. A Puerto Rican female response.
Factor VI	Paternal pressure	Contains a theme of yielding to the father's authority and accepting his advice. Characteristic of Puerto Rican females.
Factor VII	Achievement performance	Describes a person who is trying to achieve and to improve herself. More typical of Puerto Rican females.

Factor I Eight items, mostly from the IPS, loaded heaviest on the first Michigan male - Michigan female factor. The items described a student whose parents discourage his completing his education; school is more important for brothers and sisters or for rich people. The content of the factor was similar to Factor II for Michigan females and Puerto Rican females. Factor I was assigned the label of educational destiny.

Factor II Nine items loaded heaviest on the second factor; the majority were drawn from the IPS. The theme of the factor was that sources of success lay outside of the efforts of the individual; success is the result of being beautiful, on good terms with the teacher, or rich. Factor II was labeled intrinsic verses extrinsic achievement.

Factor III Eight items loaded heaviest on the third factor; most were IPS items. The theme of the items was that working is more important than winning games. Success is achieved through helping oneself, not by luck. Factor III was named work orientation.

Factor IV Five items, three from the HTI and two from the IPS, loaded heaviest on Factor IV. The theme of the factor was an expression of the desire to have friends be fearful but not alienated. Factor IV was labeled social orientation.

Table 4.16.--Factor I Items and Loadings Michigan Males and Michigan Females

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction*	Item	Loading
101	25	IPS	+	My parents believe that education is only for rich people.	.5912
105	26	IPS	+	My parents think that it is more important for my brothers and sisters to receive an education than me.	.5112
112	30	IPS	-	In order to achieve something important one must go through hard times.	.4626
76	45	HTI	+	I am the kind of person who wants to be liked by everyone.	.4400
24	5	IPS	+	The less attention you get from the teacher, the better for you.	.4376
98	24	IPS	-	In my family, it is understood that all children must be educated.	.4239

*A plus indicates that Michigan males responded more favorably to the item than Michigan females; a minus indicates the males responded less favorably than did the females.

Table 4.16.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
14	32	GSCI	2	1) Receive orders, or 2) Give orders.	.3936
86	21	IPS	+	I have to quit school so my younger brothers and sisters can obtain the education that they need.	.2968

Table 4.17.--Factor II Items and Loadings Michigan Males and Michigan Females

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
19	3	IPS	+	A beautiful girl achieves success sooner.	.6507
20	4	IPS	+	To obtain the highest grades you have to be on good terms with the teacher.	.6398
11	31	GSCI	2	1) Be poor but honest, or 2) Be rich but necessarily shrewd.	.5489
97	48	HTI	+	I wish my parents were rich.	.4105
60	13	IPS	+	You must cheat in order to win.	.3654
97	23	IPS	+	It wouldn't matter if I turn in someone else's work if the teacher demands more than I can do.	.3165
78	20	IPS	-	I hate to argue with people.	.3003
16	2	IPS	+	Material things are more important to me than people.	.2699
92	47	HTI	+	People can persuade me I am wrong by using reasonable arguments.	.1208

Table 4.18.--Factor III Items and Loadings Michigan Males and Michigan Females

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
47	10	IPS	-	Working is more important than winning games.	.5267
54	12	IPS	-	A real man does not let a woman tell him what to do.	.5239
18	33	HTI	-	I like to write letters.	.4641
34	8	IPS	-	I prefer to be known as a good parent rather than as an intellectual.	.3920
106	27	IPS	-	The lazy person hides behind his "bad luck" to justify not helping himself.	.3686
30	7	IPS	-	The idleness of some surprises me.	.3339
71	18	IPS	+	To enter the university and later interrupt your studies without obtaining a degree is a waste of money and time.	.2792
61	42	HTI	-	I think my mother has a lot of good advice to give me about how a real woman should go about getting along well with her husband.	.2747

Table 4.19.--Factor IV Items and Loadings Michigan Males and Michigan Females

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
28	35	HTI	+	I pretend to not like school so my friends won't make fun of me.	.6491
31	37	HTI	-	My mother objects to my study- ing when there is work to be done around the house.	.6475
19	34	HTI	+	I would like people to fear me to such a point that no one could dare deny my requests.	.4731
74	19	IPS	-	It is always wise to do more than that which the teacher expects of the student.	.2925
27	6	IPS	+	Having success in school often means being lonely.	.2741

Table 4.20.--Factor V Items and Loadings Michigan Males and Michigan Females

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
29	36	HTI	+	I play to win.	.5670
62	14	IPS	+	The majority of my friends won't go as far as me in a profession.	.5019
88	46	HTI	+	Winning is the most important thing.	.4536
33	38	HTI	+	I have friends who can always get me some job.	.4445
49	11	IPS	+	To really win you must compete with another person.	.4436
60	41	HTI	+	I like for people to express their beliefs and then prove them wrong.	.4326
45	39	HTI	+	I can solve any problems if I have enough time.	.4105
40	9	IPS	+	By nature, man is more intelligent than woman.	.3798
63	15	IPS	+	Sometimes it is necessary for a man to punish his wife in order to establish his author- ity in the home.	.3391

Table 4.20.--Continued

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
70	44	HTI	+	I try harder to win if I have a bet.	.3167
1	1	IPS	-	People interest me more than ideas.	.2848

Table 4.21.--Factor VI Items and Loadings Michigan Males and Michigan Females

Test Item Number	Print-out Number	Test	Mich. Male Scoring Direction	Item	Loading
67	17	IPS	+	School is for girls; boys can't feel comfortable in it.	.5465
63	43	HTI	-	When I say I will do some- thing, I will do it.	.5180
65	16	IPS	+	Women don't have to study as much as men to obtain high grades.	.4923
59	40	HTI	-	I would like to see the world.	.4026
95	22	IPS	+	I am really unhappy with the leader of our group, but I do not let him know.	.3893
111	29	IPS	+	Most of what one must do to obtain high grades is not very important.	.2923

Factor V Eleven items loaded heaviest on Factor V; they were about equally distributed between the HTI and the IPS. The items described a person who sees life from a masculine, competitive viewpoint and who fantasizes that he is always the winner. The factor was labeled role identification.

Factor VI Six items, four from the IPS and two from the HTI, loaded heaviest on the sixth Michigan male - Michigan female factor. Factor VI was somewhat similar to Factor II for Michigan males and females, extrinsic verses intrinsic achievement. Factor VI was focused more on school and describes a person who sees school as a woman's world in which males have less chance of success. The factor was labeled school orientation.

Summary Interpretations of Michigan Male - Michigan Female Factors

The six factors which emerged in the intra-cultural comparison of Michigan males with Michigan females are listed and described in Table 4.16.

Puerto Rican Male - Puerto Rican Female Factors

Six factors emerged from the factor analysis of items which discriminated between Puerto Rican males and Puerto Rican females. The experimental test source, items, scoring direction and factor loadings are summarized in

TABLE 4.22.--Labels and Descriptions for Six Michigan Male - Michigan Female Factors

Factor Label		Factor Description
Factor I	Educational destiny	Describes a person whose parents discourage his completing his education. More typical of the males.
Factor II	Extrinsic vs. intrinsic achievement	Contains a perceptual theme that the sources of success lay outside the efforts of the individual. Characteristic of the males.
Factor III	Work orientation	Describes a person who believes that working is more important than winning games. The modal female response.
Factor IV	Social orientation	Comprises a theme of wanting to exercise control over social situations without alienating friends. A male response set.
Factor V	Role identification	Describes a person who sees life from a masculine, competitive viewpoint and who fantasizes that he is always the winner. Characteristic of males.
Factor VI	School orientation	Describes a person who sees school as a woman's world in which males have little chance of success. A male perception.

Tables 4.23 through 4.28. The directionality of each factor is discussed later in Chapter IV under, "Factor Interpretation Related to Hypotheses."

Factor I Twenty-one items loaded heaviest on the first factor for Puerto Rican males and females. All of the items were drawn from the IPS. The content of the factor consisted of a general devaluation of education, the devaluation being supported by the parents. Considerable rationalization is used to explain why school is unimportant. Like Factor II for Michigan and Puerto Rican females, the factor was labeled educational destiny.

Factor II Twenty-one HTI items loaded heaviest on the second factor. The items described a person who is trying to achieve and improve, partially by seeking the advice of parents. The items are similar to Factor VII for Michigan and Puerto Rican females. The factor was named achievement orientation.

Factor III Eleven IPS items loaded heaviest on the third factor. The theme of the factor was outstanding achievement in school, doing more than is expected by the teacher. The factor was labeled academic orientation.

Table 4.23.--Factor I Items and Loadings Puerto Rican Males and Puerto Rican Females

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
101	36	IPS	+	My parents believe that education is only for rich people.	.6553
111	39	IPS	+	Most of what one must do to obtain high grades is not very important.	.6402
43	14	IPS	+	You must go abroad if you desire a good education.	.6292
46	16	IPS	+	My parents don't care if I finish my schooling.	.6386
97	34	IPS	+	It wouldn't matter if I turn in someone else's work if the teacher demands more than I can do.	.5938
76	29	IPS	-	The best way to dominate a "bully" is to yield to him.	.5819

*A plus indicates that Puerto Rican males responded more favorably to the item than Puerto Rican females; a minus indicates the males responded less favorably than did the females.

Table 4.23.--Continued

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
62	22	IPS	+	The majority of my friends won't go as far as me in a profession.	.5809
52	17	IPS	+	My parents would prefer that I find a good job rather than continue studying.	.5701
70	25	IPS	+	My father's concept of living is good enough for me.	.5181
20	8	IPS	+	To obtain the highest grades you have to be on good terms with the teacher.	.5117
92	33	IPS	+	Obtaining an average grade does not excite me if others also receive one.	.4991
27	11	IPS	+	Having success in school often means being lonely.	.4967
12	5	IPS	+	The outstanding student does not function any better outside the school than the average student.	.4885
60	21	IPS	+	You must cheat in order to win.	.4866

Table 4.23.--Continued

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
99	35	IPS	+	Obtaining a high grade doesn't excite me if others obtain one too.	.4858
56	19	IPS	+	I constantly change my mind about what I would like to do.	.4530
81	31	IPS	-	One way to avoid getting hurt is by not getting involved with people.	.4273
117	42	IPS	+	I will probably work less rigorously than my father.	.3527
19	7	IPS	+	A beautiful girl achieves success sooner.	.3486
75	28	IPS	-	Sometimes it is dangerous to win an argument.	.2956
23	9	IPS	+	The people around me get too excited about any little thing.	.2081

Table 4.24.--Factor II Items and Loadings Puerto Rican Males and Puerto Rican Females

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
81	69	HTI	-	I try to achieve the best I can.	.7207
65	63	HTI	-	I constantly try to improve myself.	.7004
61	61	HTI	-	I think my mother has a lot of good advice to give me about how a real woman should go about getting along well with her husband.	.6268
88	74	HTI	-	Winning is the most important thing.	.6215
89	75	HTI	-	I deserve what I have.	.6070
64	62	HTI	-	It bothers me for people to be so critical.	.5885
87	73	HTI	-	My father has a lot of good advice to give me about how to get ahead in life.	.5788
71	66	HTI	+	I think my father has a lot of good advice to give me about how to raise my children.	.5699

Table 4.24.--Continued

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
84	72	HTI	+	I put off my decisions until I have all the information.	.5687
41	56	HTI	-	I prefer studying to doing nothing.	.5325
53	58	HTI	+	If I just put my mind to it, I could be much more success- ful in school than I am now.	.4944
70	65	HTI	+	I try harder to win if I have a bet.	.4713
74	68	HTI	+	I think my father has a lot of good advice to give me about what a real woman has to do to get along well with her husband.	.4553
73	67	HTI	-	I tend to not question ideas that people whom I respect suggest.	.4538
24	47	HTI	-	I wish my parents would worry more about what I do in school.	.3782
95	78	HTI	-	In a country like ours, every- body has the same choice.	.3689

Table 4.24.--Continued

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
36	54	HTI	-	I have the energy to do what my teacher expects of me.	.3687
30	50	HTI	-	My parents consult my teachers about my school work.	.3243
50	57	HTI	+	I go along with my friends in criticizing the teacher, but I am really not in agreement with them.	.3069
33	52	HTI	-	I have friends who can always get me some job.	.2876
29	49	HTI	+	I play to win.	.2484

Table 4.25.--Factor III Items and Loadings Puerto Rican Males and Puerto Rican Females

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
74	27	IPS	-	It is always wise to do more than that which the teacher expects of the student.	.5997
57	20	IPS	-	I believe I can achieve what I have set out to do.	.5651
68	24	IPS	-	Anybody can achieve outstanding grades if they set their minds to it.	.5197
66	23	IPS	-	It is more important to have a good education than a good job.	.4785
82	32	IPS	-	I have known for some time the occupation I would like to follow.	.4659
102	37	IPS	-	I have worked better in school because some teachers have helped me in the past.	.3799
41	13	IPS	-	A girl should be chaperoned by her chaperone on dates.	.3477

Table 4.25.--Continued

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
71	26	IPS	-	To enter the university and later interrupt your studies without obtaining a degree is a waste of money and time.	.3383
78	30	IPS	-	I hate to argue with people.	.2654
53	18	IPS	-	It is better to work than to receive welfare from the government even though it may mean less income.	.2509
120	43	IPS	+	I have always been interested in the same thing.	.2419

Table 4.26.--Factor IV Items and Loadings Puerto Rican Males and Puerto Rican Females

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
96	79	HTI	+	I go places that really don't interest me much just to be with the people.	.6659
83	71	HTI	+	I prefer to bet on the achievements of other people and not on my own.	.4834
16	45	HTI	+	When I get tired of a job, I leave it as soon as I can.	.4379
90	76	HTI	+	People who succeed in life are those from rich families.	.4359
55	59	HTI	+	I go to parties that don't interest me just to be with the group.	.4142
60	60	HTI	+	I like for people to express their beliefs and then prove them wrong.	.3918
68	64	HTI	+	I like to persuade others to think as I do.	.3756
99	80	HTI	+	My mother complains that I don't study enough.	.3538

Table 4.27.--Factor V Items and Loadings Puerto Rican Males and Puerto Rican Females

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
5	1	IPS	-	A good way to personal power is through school.	.6081
7	2	IPS	-	I go to school because I want to learn.	.4871
17	6	IPS	-	A new student in high school should win the esteem of the staff in his school as soon as possible.	.4099
27	48	HTI	+	I prefer to keep a product I have bought even if it is defective before exchanging it in the store where I bought it.	.3316
39	55	HTI	-	Even when I get tired of a job, I always finish it.	.3111
93	77	HTI	+	I dream of winning a great deal of money.	.2980
25	10	IPS	+	It is difficult to take an interest in school when my family needs my help.	.2824
18	46	HTI	-	I like to write letters.	.2148

Table 4.28.--Factor VI Items and Loadings Puerto Rican Male and Puerto Rican Female

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
39	12	IPS	-	Work in itself can be a pleasant activity.	.4799
106	38	IPS	-	The lazy person hides behind his "bad luck" to justify not helping himself.	.4517
10	3	IPS	+	Nobody should do more than that which is asked of him.	.4379
113	41	IPS	+	My parents will be disappointed with me if I don't finish at least high school.	.4152
45	15	IPS	-	To be great a country must develop its intellectual potential.	.4125
11	4	IPS	-	I feel that I can contribute something to the people of my community.	.3823
112	40	IPS	+	In order to achieve something important one must go through hard times.	.3066
6	44	GSCI	1	1) Live in a luxurious house and work every day, or 2) Live humbly and enjoy many free days.	.2838

Table 4.28.--Continued

Test Item Number	Print-out Number	Test	Male Scoring Direction	Item	Loading
31	51	HTI	+	My mother objects to my studying when there is work to be done around the house.	.2592
35	53	HTI	-	I answer questions rapidly and almost always am correct.	.2271

Factor IV Eight HTI items loaded heaviest on Factor IV. The items described a person who is submissive in his relationships with others and who lacks confidence in his own ability to achieve in life. The label of social orientation was assigned to Factor IV.

Factor V Eight items, half IPS and half HTI, loaded heaviest on the fifth factor. The theme expressed through the items was one of gaining power and esteem through school. The factor was labeled mobility through education.

Factor VI Ten items, drawn mostly from the IPS, loaded heaviest on the sixth factor. The factor theme was similar to the protestant ethic; work is pleasant, good, a value in itself. Factor VI was labeled work orientation.

Summary Interpretations of Puerto Rican
Male - Puerto Rican Female Factors

The six factors which were identified in the comparison of Puerto Rican males with Puerto Rican females are listed and given summary interpretations in Table 4.29.

Factor Interpretation Related to Hypotheses

The comparison of factor labels and descriptions with an hypothesized factor structure is a subjective process. The labeling and interpreting of each factor is

TABLE 4.29.--Factors and Descriptions for Six Puerto Rican Male - Puerto Rican Female Factors

Factor Label		Factor Description
Factor I	Educational destiny	Contains a theme of devaluation of education, the devaluation being supported by the parents. Typifies Puerto Rican males.
Factor II	Achievement orientation	Describes a person who is trying to achieve and improve, partially by seeking parental advice. A female response.
Factor III	Academic orientation	Comprises a theme of outstanding achievement in school, of doing more than is expected. The modal response of Puerto Rican females.
Factor IV	Social orientation	Describes a person who is submissive in his relationships with others and who lacks confidence in his own ability. A male characteristic.
Factor V	Mobility through education	Contains a theme of gaining power and prestige through education. Characteristic of females.
Factor VI	Work orientation	Contains a protestant ethic theme; work is good, a value in itself. A female perception.

somewhat intuitive, and the decision to reject or not reject the hypothesis is not an objective one. To minimize bias, the factors were labeled and interpreted without reference to the hypothesized structure. Two judges, one of whom has extensive experience in factor interpretation, independently labeled each set of factors. The two judges were in nearly complete agreement regarding the nature and interpretation of each factor. As far as was possible, the factor descriptions were written from the language used in the instrument. The following is a subjective comparison of those factors which were identified through factor analysis with the factor structure hypothesized in Chapter III (see Table 3.4 on page 41). Appendix B contains a list of those factors related to each of the five general areas of investigation outlined on Table 3.4.

Michigan Males - Puerto Rican Males

Four of the five factors which were identified in comparing males of the two cultures were similar in content to some part of the hypothesized structure. However, not all of the expected differences emerged as distinct factors.

Factor I Parental pressure is in agreement with two of the hypothesized areas of difference, authority relations and value of academic achievement. The factor items

indicate, as predicted, that Puerto Rican males accept the authority of their parents who discourage completing school by devaluing education themselves.

Factor II Extrinsic versus intrinsic achievement is similar to the hypothesized value of initiative and independence. The direction of the factor items is complex and not completely in keeping with the expected outcome. Puerto Rican males reportedly value initiative more than stateside males; as this is the directional opposite of the hypothesis, it must be considered a negative finding. Puerto Rican males show more reliance on parental advice, substantiating the hypothesis that stateside males value independence more than their Puerto Rican counterparts.

Factor III Social orientation is comparable to the hypothesized personality factor of inner-directedness. Puerto Rican males demonstrate a greater willingness to subjugate their own interests to the desires of friends. As expected, they are more other-directed than stateside males.

Factor IV Parental valuing, like Factor I, is similar in content to the hypothesized areas of authority relations and value of academic achievement. The direction of this factor was difficult to determine because there were

contradictory responses to similar items. If it is assumed that the Puerto Rican concept of education is "attending school" and the stateside concept of education is "completing school," the factor makes sense. It can then be stated that Michigan males value academic achievement more than Puerto Rican males. If such an assumption is not made, the directionality of the factor is not interpretable.

Factor V Social interaction was a factor which had no counterpart in the hypothesized cultural differences and is a supplementary finding. Michigan males express more anxiety over different kinds of interpersonal contacts, e.g., arguing, than did Puerto Rican males.

Michigan Females - Puerto Rican Females

Each of the seven factors which emerged in the Michigan female - Puerto Rican female analysis were comparable to elements of the hypothesized structure.

Factor I Maternal pressure is related to the hypothesized authoritarian orientation. Puerto Rican females identify with and seek advice from mother more than stateside females.

Factor II Educational destiny encompasses three of the hypothesized cultural differences: value of academic achievement, source of success, and long-term goals. Puerto Rican females reported less anticipation of continuing their education in the future. They see less chance of academic success than do stateside females, partially because of parental discouragement. Michigan females do not see luck as a deciding factor in grades as do the insular females.

Factor III Social orientation is nearly identical in content to the hypothesized factor, inner-directedness. However, the direction was the reverse of what was anticipated. Michigan females more readily make concessions of personal interest to placate friends than do insular females.

Factor IV Work orientation is comparable to the hypothesized value held of hard work. As expected, Michigan females value hard work more than Puerto Rican females do.

Factor V Authority relations is identical in content and direction to the expected authoritarian orientation factor. Puerto Rican females are more responsive and submissive to authority than are stateside females.

Factor VI Paternal pressure, like Factor I and V, is similar to the predicted authoritarian orientation. This factor represents the insular female's submission to paternal authority and the stateside female's relative freedom from the father.

Factor VII Achievement performance is related to the hypothesized factor, value of academic achievement. However, the direction is the reverse of what was predicted; Puerto Rican females reportedly value achievement more than Michigan females. Factor VII is therefore a negative finding.

Michigan Males - Michigan Females

Five of the six Michigan male - Michigan female factors were similar in content to a portion of the hypothesized factor structure. However, the directionality was not consistent with what was predicted.

Factor I Educational destiny is related to the hypothesized factor, value of academic achievement. Michigan males perceive their parents as depreciating education more than the females do. As no difference was predicted between the sexes, Factor I cannot be considered a positive finding.

Factor II Extrinsic versus intrinsic achievement is similar in content to the predicted factor, source of success. Michigan males see external factors as influencing success more than Michigan females do. Again no difference was predicted, and the finding is a negative one.

Factor III Work orientation is similar in content to the expected factor, value of hard work. Although no difference between the sexes was predicted, females claim to value work more than males do.

Factor IV Social orientation is somewhat related to that part of the hypothesized structure labeled, inner-directedness. Contrary to the predicted direction, Michigan females report being more inner-directed in their social relationships than do Michigan males.

Factor V Role identification is a factor which is not clearly related to any part of the expected factor structure. Michigan males perceive themselves as fulfilling a social role of intense competitiveness in which they are almost always quite successful.

Factor VI School orientation is a specific factor related to the more general hypothesized factor, source of success. Michigan males see school as a woman's world

in which males have little chance of success. No difference was predicted, and the finding is negative.

Puerto Rican Males - Puerto Rican Females

In comparing the responses of Puerto Rican males with Puerto Rican females, six factors emerged, each of which related to some portion of the hypothesized factor structure. The directionality of the responses was not consistent with what was predicted.

Factor I Educational destiny is similar in content to two of the hypothesized areas, authority relations and value of academic achievement. Contrary to prediction, the males are more responsive to parental pressure, more likely to devalue education as their parents do, than are females. The expectation was that there would be no difference between the two sexes.

Factor II Achievement orientation is most like the hypothesized area, value of initiative. However, the directionality is the reverse of what was anticipated. Puerto Rican females claim to value achievement and self-improvement more than males do.

Factor III Academic orientation is nearly identical to the projected factor, value of academic achievement. Again

the direction was not consistent with the predicted outcome. The females are more academically oriented, hold more positive attitudes toward school achievement than do the males. No difference between the sexes was predicted.

Factor IV Social orientation combines the content of two of the hypothesized areas, withdrawal and inner-directedness. Contrary to the hypothesized directions, males report themselves as being more withdrawn and less inner-directed than females. Possibly, the males are so dependent upon others for direction and support that withdrawal is a defense against the consequent anxiety.

Factor V Mobility through education is most similar to the predicted area, long-term goals. It was expected that both sexes in Puerto Rico would be unlikely to focus on long-term goals. However, the females see education as a means of achieving power and prestige more than the males do.

Factor VI Work orientation is nearly identical to the hypothesized area, value held of hard work. No difference was predicted between the sexes, but females indicate they value hard work more than males do.

TABLE 4.30.--Factor Structure of Relationship of Puerto Rican and Michigan Cultures to Five Areas for Males and Females

Area		Michigan		Puerto Rican	
		Males	Females	Males	Females
I	<u>Authority Relations</u>				
	Authoritarian orientation	<u>Negative</u>	<u>Negative</u>	<u>Positive</u>	<u>Positive</u>
II	<u>Sex Role</u>				
	Attitude toward opposite sex	-	-	-	-
III	<u>Work Orientation</u>				
	Value held of hard work	Medium	<u>High</u>	Low	<u>Medium</u>
	Value of initiative and independence	Low	-	<u>Medium</u>	High
IV	<u>Implicit World View</u>				
	Value of academic achievement	Medium	<u>High</u>	Low	<u>Medium</u>
	Source of success	Others	<u>Self</u>	-	<u>Others</u>
V	<u>Personality</u>				
	Withdrawal	-	-	Medium	Low
	Reality testing	Medium	<u>High</u>	-	-
	Inner-directedness	<u>Medium</u>	High	<u>Low</u>	Medium
	Long-term goals	-	<u>High</u>	<u>Low</u>	Medium

A dash indicates the hypothesized factor did not emerge.

Underlining indicates the directionality was consistent with the hypothesis.

Note: See Table 3.4 on page 41 for hypothesized factor structure.

Table 4.30 is an overview of the factor structure which emerged through factor analysis of significant items. A dash in the table indicates that the pertinent factor did not emerge as hypothesized and drawing comparisons was not possible. Underlined words are those in which the directionality of the factor conforms to the hypothesis; words which are not underlined indicate that the expected factor emerged, but the directionality was not as hypothesized. See Table 3.3 (supra Chapter III) for the complete factor structure which was hypothesized.

Summary

In analyzing the results, a chi square item analysis yielded 164 significant items when comparing Michigan males with Puerto Rican males, 160 significant items for Michigan females - Puerto Rican females, 47 items for males and females in Michigan, and 80 items for Puerto Rican males and females. Each of the four sets of significant items were subjected to factor analysis. Five factors were identified for males in the two cultures, seven for females in the two cultures, six for Michigan males and females, and six for Puerto Rican males and females. The actual factor structure approximated the factor structure hypothesized in Chapter III. However, the directionality of the items in each factor was not always consistent with what was predicted, particularly in the intra-cultural analysis.

CHAPTER V

DISCUSSION

Cross-culturally the data was supportive of the hypotheses set forth at the outset of the study. Definite differences exist in the reported attitudes and personalities of the students in the two cultures. However, differences between males and females within each culture did not materialize quite as expected. The intra-cultural factor structure was generally as hypothesized, but the directionality of the factors was not consistent with the original predictions.

Item Analysis

The overall capacity of an instrument to discriminate between samples can be roughly estimated by the percentage of items which cross-validate on a chi square analysis. The expectation that the instruments used in this study would be sensitive to cross-cultural differences in attitude and personality was fulfilled. Using a .20 alpha level, 160 of the total 222 (72 percent) items discriminated in both cross-cultural analyses, Puerto Rican

males with Michigan males and Puerto Rican females with Michigan females. The conventional .20 alpha level was selected to generate a maximum number of items for the subsequent factor analysis. However, the use of a more stringent alpha level would have reduced the number of significant items very little. Using a .05 alpha level, 11 fewer items in the comparison of Puerto Rican males with Michigan males and 17 fewer items in the Puerto Rican female--Michigan female comparison would have cross-validated.

The number of items cross-validating on intra-cultural comparisons was considerably less than on cross-cultural comparisons. However, there was a noticeable difference between the two cultures in this respect. About twice as many items were significant in Puerto Rico (80) as in Michigan (47). This result lends additional support to earlier anthropological findings (supra Chapter II) that Puerto Rican males and females are less homogeneous in attitude and personality than are stateside males and females.

Factor Analysis

All of the factors were psychologically interpretable although some were more readily understood than others. Because of the small number of factors and large number of significant items, some factors contained thirty to fifty items. Factor labels and descriptions are based primarily upon the five to ten items with the heaviest loadings;

consequently, many items on the longer factors did not contribute significantly to factor interpretation or to the overall factor structure.

Puerto Rican Males - Michigan Males

Four of the five factors identified in comparing males of the two cultures were similar in content to some part of the hypothesized factor structure. However, not all of the expected differences emerged as distinct factors.

Authority Relations.-- As anticipated, the Puerto Rican male reported himself as more responsive to authority than did his stateside counterpart. The authoritarian orientation of the insular male was especially evident in his perception of his parents and the subsequent effect of that perception upon his own attitudes. He saw his parents as discouraging education and academic achievement and as communicating that school was more important for his brothers and sisters than for him. He concurrently believed that education was of little value to him, that a good education required going abroad, and that working was more important.

More than the stateside male, the Puerto Rican male displayed a vested interest in the authoritarian posture of his culture. The masculine role requires that he dominate his wife and children even though he may be impotent in the society at large. Only a generalized attitude of submission to authority permits the male to

continue his dominance. Consequently, rather than independently shedding parental attitudes, he submits in order to preserve for himself the dominant role in his own future family. Moreover, the discouraging behavior of his parents provide a means of avoiding responsibility for personal success in school. Although the submission to parental authority is in some ways self-defeating, it apparently held more psychological advantages to the Puerto Rican male than did independence.

Attitude Toward Opposite Sex.-- The hypothesized factor related to attitude toward the opposite sex did not materialize. The most probable reason is that initially there were an insufficient number of relevant test items to generate a factor. Those items which were pertinent showed a difference between males of the two cultures, the Puerto Rican male perceiving the female as inferior and the stateside male seeing her as more equal. The only conclusions which can be drawn is that either the instruments did not successfully tap this particular complex of attitudes or that no relevant cross-cultural difference existed for males.

Work Orientation.-- Only part of the area of work orientation emerged in the factor analysis; the value held of hard work hypothesis was not substantiated. Conceivably, the protestant ethic has been sufficiently internalized by Puerto Rican males to obliterate cross-cultural differences.

An alternative explanation is that stateside males are not as accepting of the value of hard work as was supposed. There is little doubt but what some change has occurred in stateside values, work becoming more of a means and less of an end in itself. Both possibilities may be true and, working in conjunction, serve to explain the lack of cross-cultural differences for males.

The second hypothesis in the work orientation area, value of initiative and independence, did emerge as a factor which was labeled extrinsic versus intrinsic achievement. However, the interpretation of the factor is complex. Puerto Rican males valued initiative more than stateside males, but were more reliant upon parental advice. The latter finding is supportive of the notion that the Spanish-colonial influence upon the Puerto Rican has left him dependent whereas his stateside counterpart is more likely to rely upon himself. Because of past anthropological reports to the contrary, it is difficult to explain the Puerto Rican's valuing initiative. Perhaps the industrialization of the island has opened opportunities which create hope and encourage individual effort; by contrast, the extent of stateside technology may have discouraged initiative.

Implicit World View.-- Two factors, parental pressure and parental valuing, upheld the hypothesis that stateside males would value academic achievement more than

insular males. The Puerto Rican male was not inclined to see school as a means to better economic position; education was viewed as a waste of time, and it was rationalized that good students do not do any better than poor students in the work world. Stateside males expressed more confidence in their schools than Puerto Rican males; the latter believed that a good education can be gained only by going abroad. This negative attitude may also have been reflective of the fact that the economically privileged attend private schools in Puerto Rico.

The hypothesized "source of success" did not materialize as a cross-cultural factor for males. The failure of this factor to emerge is related to the finding on the value of initiative. If stateside males did not see themselves as the ultimate source of their success, it is reasonable that they would not particularly value initiative. Somehow, Puerto Rican males placed some value on initiative even though they tended to view the sources of success as resting outside of themselves.

Personality.-- The only dimension of personality which materialized in the cross-cultural analysis for males was that of "inner-directedness." Withdrawal, reality testing, and long-term goals did not emerge as factors differentiating between males of the two cultures. Puerto Rican males displayed considerable deference to others, subjugating their own interests and desires to the wishes of friends. They indicated they would go to

uninteresting places, make pretenses, and would allow others to take advantage of them to avoid alienating friends. Friendship is apparently very high in the Puerto Rican value structure, superceding independence and personal interests. In comparison, the stateside male was more self-directed. The mobility, both geographical and social, of the stateside culture may account for the Michigan male's reticence to submit to friendships which are unlikely to be of lifelong duration. Within the respective settings, males of both cultures may be ultimately responding to personal interest; friendships may have more pragmatic value to Puerto Rican males while inner-directedness is a more practical posture for stateside males.

An unexpected finding occurred in the cross-cultural comparison of males, namely, a social interaction factor. Within this factor stateside males expressed anxiety about several areas, e.g., the future and success. However, the general theme was one of anxiety in interpersonal relationships; that is, they perceived winning an argument as dangerous and felt they were often not understood by others. This finding may have relevance to the inner-directedness dimension discussed above. Although the Puerto Rican tended to be dependent and submissive in his relationships with others, he appeared to also be relatively secure. The stateside male, acting independently and being self-directed, apparently viewed his relationships as less

rewarding and less able to stand stress than did Puerto Rican males.

Puerto Rican Females - Michigan Females

All seven of the factors which emerged in the cross-cultural analysis for females related to the hypothesized factor structure. With two exceptions, directionality of the factors was consistent with what was expected. The comparison of females in the two cultures was more supportive of the hypothesized structure than any of the other three comparisons.

Authority Relations.-- Three distinct factors, maternal pressure, paternal pressure, and authority relations, support the hypothesis that Puerto Rican females are more submissive and responsive to authority than are Michigan females. Insular females responded favorably to items related to seeking and following the advice of both the mother and the father. However, in the factor, maternal pressure, there was an indication that the submission was of a passive-aggressive nature. Along with reporting themselves as submissive to the mother, they also indicated that winning is the most important thing and that they get what they want in the end, even though they don't "fight" for their rights. Stateside females, while being more independent, appeared to be less aggressive than their Puerto Rican counterparts. Because the

same aggressiveness was not included in the paternal pressure factor, it is conceivable that the Puerto Rican females were subtly expressing a rejection of the feminine role of the culture.

The factor labeled authority relations was a better indication of the nature of the insular female's submissiveness to authority. They reported believing several cultural myths, e.g., equal opportunity exists for all, and truth is always beautiful. More than stateside females, they felt they must believe what they are taught, must be cautious when speaking frankly, and preferred to stay out of arguments. They always try to do more than their teachers expect of them. Submission to authority appeared to be an attitude which permeated the thinking of Puerto Rican females.

Attitude Toward Opposite Sex.-- Sex role did not materialize as a factor, possibly because of the limited number of relevant items in the instruments. The subtle rejection of the feminine role discussed above gives some indication that Puerto Rican females saw the male role as superior in their culture.

Work Orientation.-- Michigan females believed that achievement demands effort and going through hard times. The notion embodied in the protestant ethic, that hard work and sacrifice are intrinsically good, was a subtle thread that ran through the items in the factor. More

than Puerto Rican females, the stateside females believed that the lazy person hides behind bad luck. Apparently, the stateside attitude that great effort and sacrifice are important human attributes has not been fully accepted by Puerto Rican females.

Implicit World View.-- The comparative world views of Michigan and Puerto Rican females was a peculiar mixture of attitudes. The achievement performance factor was evidence that Puerto Rican females placed greater value on academic achievement than did stateside females. Such an attitude should have been expected because the academic arena is the insular female's primary means of upward mobility. By contrast, the stateside female's mobility is more closely linked with that of her husband. However, the factor labeled educational destiny suggested that stateside females were more hopeful of continuing their education, partially because they did not receive the parental discouragement experienced by their insular counterparts. The stateside female saw the opportunity for education as open to her and dependent upon her own effort; the Puerto Rican female believed she had a less chance for academic success and that luck was an important determinant of her fate.

Personality.-- Withdrawal and reality testing did not emerge as distinct factors; however, there was in other factors a hint of the existence of these areas. The

lack of hope of academic achievement and the viewing of such as beyond personal control is akin to withdrawal. The acceptance of cultural myths, such as, truth is always beautiful and equal opportunity exists for all, is a mild indication of poor reality testing.

An unexpected outcome occurred within the inner-directedness dimension of personality. It was anticipated that Puerto Rican females would be basically other-directed, subjugating their own interests to the desires of their friends. However, unlike the males of the culture, they reported themselves as more inner-directed than did the stateside females. By comparing factor directionality of this personality dimension across the four samples used in the study, Puerto Rican females appeared to be the most inner-directed. Exactly why this should be true is unclear. Perhaps the industrialization of the island has given the female a greater opportunity for independence and social mobility, making long-term friendships not only less important but possibly even a hindrance to social climbing. They apparently no longer wish to be limited by the kinship and friendship patterns of the past. The extent of their inner-directedness hints at reaction formation; they appear to be over-reacting to the traditional dependent, submissive role of Puerto Rican woman.

Michigan Males - Michigan Females

Five of the six factors which emerged in the intra-cultural comparison of Michigan students were relevant to the hypothesized factor structure. However, within the factors, directional reversal occurred in each of the five areas, suggesting that either the hypotheses were not adequately constructed on the basis of past research or significant changes are occurring in the attitudes of stateside students.

Authority Relations.-- As expected, no factor materialized demonstrating a difference between stateside males and females in their orientation to authority. Stateside students were less responsive to authority than their Puerto Rican counterparts.

Attitude Toward Opposite Sex.-- No intra-cultural difference was anticipated in attitude toward the opposite sex, and no relevant factor emerged.

Work Orientation.-- Contrary to the expectation that there would be no difference, Michigan females reported valuing hard work more than did Michigan males. The females reacted negatively to laziness and idleness and saw working as more important than winning games. A partial explanation of this finding may lay in the relatively recent opening of the full occupational spectrum to women. With female service station attendants and female lawyers becoming more common, the stateside woman may be placing more value on vocational achievement than

the male for whom such opportunities have always been available. There is greater acceptance of the notion that the woman needs to express and fulfill herself outside of the home, and she appears to be responding by placing greater value on hard work than males do.

Implicit World View.-- Related to the work orientation of stateside students was the value placed upon academic achievement. No difference was anticipated in this area, but again, females reported being more concerned with success in school than males. Males perceived their parents as depreciating education.

Both sexes were hypothesized to view themselves rather than outside influences as the ultimate source of success, but the data did not support the assumption. The males were more inclined to see school as a woman's world in which males have less chance of success; this particular viewpoint may be partially explanatory of the greater value of academic achievement to women. Outside of school, males still saw success as having less to do with self than with external factors. Cheating was more acceptable to males, and beauty, money, and influence were viewed as having more impact than personal effort. In some ways, this attitude may be a masculine rationalization for a fear of failing in an extremely competitive society. Blaming external factors for failure or anticipated failure is a common means of escaping responsibility for

personal effort. By contrast, the stateside female, who actually has some societal factors working in her disfavor, appeared to accept greater responsibility for her own efforts, failures, and successes.

Personality.-- No difference between the stateside sexes was predicted for any personality dimension other than inner-directedness. Only five items loaded on the factor labeled social orientation, and some extrapolation was necessary to interpret the factor as being related to inner-directedness. It was anticipated that Michigan males would be somewhat more guided by internal assessments than would the females. To the extent that the social orientation factor can be applied to this personality characteristic, females appeared to be more self-directed than males. However, the relationship between the factor and the concept of inner-directedness was too tenuous to make definite statements about the nature of the difference between the sexes.

A factor labeled role identification was not related to any part of the hypothesized cultural complex. Males responded more favorably than females to the items which identified the typical masculine role in the stateside culture. Males saw their role in society as competitive and demanding of success. The factor was somewhat of a fantasy in that the males consistently saw themselves as successful and victorious. If the notion discussed above is valid,

that Michigan males are less inclined to see themselves as the real source of success, the avoidance of personal responsibility may well be related to the role fantasy that they must always be successful within an extremely competitive system. Placing less value on hard work and academic success could then be viewed as withdrawal from the imagined demands of the masculine role.

Puerto Rican Males - Puerto Rican Females

Each of the six factors identified in the intra-cultural comparison of Puerto Rican students was related to some section of the hypothesized factor structure. However, as with the stateside comparison of males and females, the direction of the factors was not consistent with predictions.

Authority Relations.-- No difference was hypothesized between the two Puerto Rican sexes in their responsiveness to authority. However, the educational destiny factor offered some evidence that males were more affected by parental pressure than females. The parallel themes within the factor were parental devaluation of education and personal devaluation of education. The males reported that their parents thought education is for the rich and that their parents did not care if they finished school; in turn, the males themselves believed that what must be done to get high grades was unimportant and that a good education could only be acquired by going abroad. More

than parental pressure is undoubtedly involved in the rationalization that school is unimportant, but the pressure would appear to be one element.

Attitude Toward Opposite Sex.-- The data provided little indication that males were perceived as superior to females. As mentioned earlier, the lack of such evidence may be a shortcoming of the instruments and cannot be construed as an indication that the two sexes view one another as equals.

Work Orientation.-- The Puerto Rican female did not appear to share the male's relative distaste for and avoidance of work. The traditional Spanish attitude toward work was that it was at best a necessary evil. The females, in the stateside tradition, viewed work as a pleasant activity in itself and believed that lazy people hide behind "bad luck." Employment for women is a relatively recent phenomena in Puerto Rico and an opportunity which offers them an alternative to poverty. It seems reasonable then that they would value work because it offers them some control over their own destiny.

Puerto Rican women also demonstrated a desire for achievement and considerable initiative in attaining it. They reported constant efforts at self-improvement and achievement and felt more deserving of what they had than males did. Again this appears to be a more recent development in the island as previous research, at best, only

hints at the possibility of such an attitude on the part of women.

Implicit World View.-- Another part of the pattern of change for the Puerto Rican female was her valuing of academic achievement. Although Farquhar and Christensen¹ provided some evidence that such an attitude existed, it was not hypothesized in this study. Set in perspective with the other factors, the academic orientation is one more indication of the developing assertiveness of the Puerto Rican female.

No factor materialized which could be directly related to the source of success hypothesis, but the demonstration of more initiative than the males implied that the female considered her own efforts as having impact upon her destiny.

Personality.-- Within the area of personality, females were expected to be less reality oriented than males; however, the data indicated no difference. Possibly the influence of mass media has overcome the prophylactic effect of the romantic Spanish myths regarding courtship, marriage, and the like.

¹W. W. Farquhar and E. W. Christensen, The Motivational Factors Influencing Academic Achievement of Eleventh Grade Puerto Rican High School Students. Final Report of Cooperative Research Project No. 2603A and B, 1968, (Office of Research and Publications, College of Education, Michigan State University, 1968).

The data provided some evidence that males were more inclined to withdraw than females. The Puerto Rican male was more disposed to bet on the achievements of others than on his own and when tired of a job, leaves it as soon as he can. In a cultural setting where dominant masculine behavior is expected of males but where little opportunity for the expression for such behavior exists, withdrawal might be expected. The unexpected outcome was that females, who have traditionally been cast into such a submissive role that female suicide rates were high, were less inclined to withdraw than the males.

At the outset of this study, males were believed to be more inner-directed than females; again the data did not support this hypothesis. Males were more likely to go along with the desires of the group than to assert their own wishes. However, some discrepancy was apparent in the males reporting of their behavior. When verbally engaged with others, the males were more expressive of their own beliefs and more disposed to try to persuade others; yet, when acting on these beliefs, the females were more inclined to follow the dictates of their own will. This discrepancy between verbalization and action suggests that superficial allegiance is given to the traditional aggressive male--submissive female pattern but that the influence of the cultural pattern has eroded when it comes to actual behavior.

No difference was hypothesized between the sexes in establishing long-term goals, but the hypothesis was not confirmed. The mobility through education factor indicated that females saw education as a means of achieving more personal power, more esteem, more control over their own destiny. Consequently, it appeared that the Puerto Rican female was more future oriented than the male. Again the female has rejected a part of her culture, the "now-orientation," in the service of her own personal interests.

The hypotheses of the study were based upon the past observations of several researchers; it is possible that their observations were inaccurate. However, the consistency of directional reversals in the intra-cultural comparison in Puerto Rico, provides a picture of an emergent female. It seems likely that important changes are currently developing in the structure of Puerto Rican society. The female appears to be, not only rejecting her old submissive role, but asserting a dominant role. She identifies with the stateside value system while the male is more tied to the traditional island culture. Both appear to be responding to that set of values which offers them the greater power.

Overview of Factor Analyses

The hypothesized factor structure (Table 3.3, supra Chapter III) was in general upheld through factor

analysis. Only the area of attitude toward opposite sex failed completely to materialize in either cross-cultural or intra-cultural analysis. The areas of authority relations, implicit world view, work orientation, and personality each emerged as a part of the total factor structure.

The directionality of the factors was not always consistent with what was predicted, e.g., Michigan females reported themselves as more inner-directed than Michigan males when the reverse was hypothesized. Directional reversals were most evident in the intra-cultural analyses. The possible reasons are numerous, but the following appear most plausible:

- 1) The hypotheses may have been based upon inaccurate information gained from the observational reports of anthropologists and sociologists. The biases inherent in observational data were discussed in Chapters I and II; it is too easy for the investigator to see what he wants to see or to focus on superficialities rather than the stronger undercurrents in attitude and personality.
- 2) Recent changes may have occurred in both cultures, modifying the position of males and females relative to the hypothesized attitudes and personality factors. Allusions to such changes appear in the research literature of both cultures. Industrialization in Puerto Rico has been directed primarily

toward female employment and has offered the woman opportunity for independence and personal success. Stateside writers have discussed the fatherless suburbs and their possible impact upon children; it has been hypothesized that young people will view the mother, or female, as the power figure in the family. Because most of the directional reversals indicated that the females in each culture were more independent, more success oriented, and stronger in personality than expected, recent intra-cultural change is especially plausible as an explanation.

- 3) It is conceivable that a social-desirability factor was operant in the responses of females in the two cultures. The accuracy of the instruments used in the study is ultimately dependent upon the honesty and clarity of assessment of the subjects. If females have a propensity to report themselves in a more favorable way than do males, this could explain the directional reversals.

Summary

Chi square item analysis produced 164 significant items in the cross-cultural comparison of males, 160 items in the comparison of females in the two cultures, 80 items in the intra-cultural comparison of Puerto Rican students,

and 47 items in the comparison of stateside males and females. The percentage of significant items in each analysis suggested that cross-cultural differences in attitude and personality were greater than intra-cultural differences and that there was greater disparity in the attitudes of Puerto Rican males and females than of stateside males and females.

The factor structure which emerged through factor analysis was very similar to the hypothesized structure. Only the area of sex role failed to materialize in any of the four comparisons. The directionality of the factors was generally consistent with predicted directions for the cross-cultural analyses. However, factor direction was frequently the reverse of what was hypothesized for the intra-cultural comparisons. Three possible reasons for the directional reversal were suggested: 1) poor bases for construction of the hypotheses, 2) recent changes in the attitudes of students in the two cultures, and 3) a social desirability factor in the responses of females.

Puerto Rican students were more responsive to authority, especially parental pressure, than were stateside students. No attitudinal difference was found between sexes in Michigan, but there was some evidence that Puerto Rican males were more authority oriented than the females.

Michigan and Puerto Rican females valued hard work more than the males of the two cultures, and stateside

females held more positive attitudes toward work than did their insular counterparts. Puerto Rican females demonstrated more initiative than males of the culture, and the Puerto Rican males gave some evidence of valuing initiative more than stateside males.

Michigan males valued academic achievement more than Puerto Rican males, but less than Michigan females. Puerto Rican females placed more value on school performance than either stateside females or Puerto Rican males. Michigan females viewed themselves as the ultimate source of success whereas stateside males and Puerto Rican females were more disposed toward seeing outside factors as determining their destiny.

In the area of personality, inner-directedness was the only dimension which materialized in all four analyses. Stateside females reported themselves as more inner-directed than did either Puerto Rican females or stateside males. The island females and Michigan males were both more inclined to be self-directed than were Puerto Rican males. The other personality characteristics did not emerge as factors except in the comparison of the two sexes in Puerto Rico. Puerto Rican males were less disposed to be future oriented and gave some evidence of being more withdrawn than the females.

Although considerable difference continued to exist in the attitudes and personality of stateside students

and Puerto Rican students, changes appear to be occurring, especially among females. The data presents a picture of an emergent female in both cultures, a woman less bound to old authority patterns, more self-directed, and more concerned with her own achievement in both the academic and work worlds. The Puerto Rican female seems to be internalizing the stateside value system while the male is holding more closely to the traditional Spanish culture of the island.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The study was designed to test certain assumptions about the differences and similarities in attitude and personality between students in Puerto Rico and students in the continental United States, as well as between males and females within each culture. The investigation was generally successful in delineating cross-cultural differences and in revealing some expected and unexpected differences between sexes within each culture.

Summary

It is important to the success of international and inter-human relations in the Americas that there is an understanding of 1) the differences and similarities in attitudes and personality between the Spanish-American and the stateside American, and 2) the probable effect upon attitudes and personality of the two cultures being inter-related. The unique mixture of the traditional Spanish and the modern stateside cultures in Puerto Rico was considered an appropriate setting for investigating the impact of culture upon attitudes and personality.

Methodology and instrumentation have been two major difficulties in cross-cultural research of the past. Earlier research was conducted by sociologists and anthropologists using observational techniques appropriate to the study of primitive cultures. In 1964, Farquhar and Christensen developed instruments called the P-Scales to study the motivational factors influencing the academic achievement of Puerto Rican students; their basic assumption was that certain attitudes and personality factors characteristic of the Spanish culture would differentially affect motivation. Until the present investigation, the P-Scales had not been administered in the states, and a direct cross-cultural comparison of the pertinent attitudes and personality facets was not possible. The work of Farquhar and Christensen, therefore, provided the stimulus as well as the instrumentation and methodology for the present study.

The hypotheses were focused on five general areas: 1) authority relations, 2) sex role, 3) implicit world view, 4) work orientation, and 5) personality. It was assumed that the attitudes and personality of Puerto Rican students would reflect the traditional Spanish culture and would stand in contrast to the attitudes and personality of students in the states.

The hypotheses were tested using the P-Scales (Scale of Individual Preferences, Generalized Situational Choice Inventory, and Human Trait Inventory) with a stratified random sample of 400 Michigan eleventh graders and 400

Puerto Rican eleventh graders. Stratification was based upon rural-urban residence, and the sample of each culture consisted of 200 males and 200 females.

For the purpose of item analysis, the sample of each culture was further divided into validation and cross-validation groups, each consisting of 100 males and 100 females. Four separate analyses were conducted: 1) Michigan males-Puerto Rican males, 2) Michigan females-Puerto Rican females, 3) Michigan males-Michigan females, and 4) Puerto Rican males-Puerto Rican females. To collect items for the subsequent factor analysis, all items (222) were validated and cross-validated using a one-tailed chi square test of significance with alpha set at the .20 level for inclusion or exclusion of items. Those items which cross-validated were retained for further analysis. For all scales, a total of 164 items discriminated between males of the two cultures, 160 items were significant for females, 47 items were obtained in the intra-cultural comparison in Michigan, and 80 items discriminated between Puerto Rican males and females.

Factor analyses yielded five factors for males in the two cultures, seven for females, six for Michigan males and females, and six for Puerto Rican males and females. The first factor for males described a person who does not like school and whose parents discourage him from continuing; it was labeled parental pressure. The second

factor was concerned with self-improvement and accomplishment and was labeled extrinsic verses intrinsic achievement. Factor three reflected an other-oriented social posture and was named social orientation. Factor four was an expression of positive parental attitudes toward education and was labeled parental valuing. The fifth male factor was focused on anxiety over various kinds of interpersonal contacts and was titled social interaction.

The first factor for females of the two cultures was maternal pressure and described a person who identifies with and seeks advice from her mother. Factor two focused on negative attitudes toward education and was called educational destiny. The third factor, social orientation, described a person who makes concessions of personal interest to placate friends. Factor four contained a theme of working hard to achieve something important and was labeled work orientation. Factor five delineated a person who is very responsive to authority and was titled authority relations. Factor six, paternal pressure, was concerned with yielding to the authority of the father. The seventh female factor reflected a desire for self-improvement and accomplishment and was labeled achievement performance.

The first factor for males and females in Michigan was educational destiny, an expression of negative attitudes toward education. Factor two was concerned with the sources of success laying outside of the efforts of the individual

and was labeled, intrinsic verses extrinsic achievement. The third factor, work orientation, contained a theme of working hard to achieve success. Factor four comprised a theme of wanting to exercise control over social situations without alienating friends and was called social orientation. Factor five described a person who sees life from a masculine, competitive viewpoint and was labeled role identification. The sixth stateside factor reflected the attitude that school was a woman's world and was titled school orientation.

For Puerto Rican males and females, the first factor contained negative attitudes toward education and was labeled educational destiny. Factor two reflected the desire for self-improvement and accomplishment and was labeled achievement orientation. Factor three was concerned with outstanding achievement in school and was called academic orientation. The label of social orientation was attached to the fourth factor which described a person who is submissive in his relationships with others. Factor five was focused on gaining power and esteem through school and was titled mobility through education. The sixth Puerto Rican factor contained a theme of work being pleasant, good, a value in itself and was labeled work orientation.

The factor structure which emerged through factor analysis was very similar to the hypothesized factor structure. Only the area of sex role failed to materialize

in any of the four comparisons. The directionality of the factors was generally consistent with predicted directions for cross-cultural analyses. However, factor direction was frequently the reverse of what was hypothesized for intra-cultural comparisons.

Puerto Rican students were more responsive to authority than Michigan students, and Puerto Rican males were more authority oriented than the females. The females of both cultures were more positively oriented toward work than were the males. The females also valued academic achievement more than the males. Michigan males were more concerned with success in school than Puerto Rican males, but the reverse was true for females. Michigan females were more disposed to see themselves as the source of their success than were Michigan males or Puerto Rican females. The females of both cultures were more inner-directed than males, and Michigan students reported themselves as more self-directed than their Puerto Rican counterparts.

It was apparent that considerable difference continues to exist in the attitudes and personality of stateside and Puerto Rican students, but changes are occurring, especially among females. The data presented a picture of an emergent female in both cultures, a woman less bound to old authority patterns, more self-directed, and more concerned with her own achievement. The Puerto Rican female seemed to be internalizing the stateside value system while

the male held more closely to the traditional Spanish culture of the island.

Conclusions

The major findings of the study were as follows:

1. Differences in attitude and personality were greater between students in Puerto Rico and students in the states than between sexes within either culture. Differences between males and females in Puerto Rico were greater than between sexes in the states.
2. Puerto Rican students were more responsive to authority, especially parental pressure, than their state-side counterparts. No difference in attitude was found between sexes in the states, but Puerto Rican males appeared to be more authority oriented than the females.
3. The area of sex role failed to emerge as a factor. Either the instrument did not tap the attitude or no appreciable difference exists, either intra-culturally or cross-culturally.
4. Michigan males placed more importance on school performance than did Puerto Rican males.
5. Michigan females viewed themselves as the ultimate source of success whereas Puerto Rican females were more disposed toward seeing outside factors as determining their destiny.
6. Stateside females valued hard work more than Puerto Rican females did.

7. Michigan males indicated they were more self-directed than Puerto Rican males.

8. The data presented a picture of an emergent female in both cultures, a woman less bound to old authority patterns, more self-directed, and more concerned with her own achievement in both academic and work worlds.

9. The value system of the Puerto Rican female appeared to be more like that of stateside students while the male seemed to be holding more closely to the traditional Spanish culture of the island.

Contrary Findings

The following were outcomes which were either contrary to the hypotheses or which emerged where no differences between samples was anticipated:

1. The females of the two cultures placed more value on academic achievement than did the males, and Puerto Rican females considered school performance more important than stateside females did.

2. Michigan females viewed themselves as the ultimate source of success whereas Michigan males were more disposed toward seeing outside factors as determining their destiny.

3. The females of the two cultures held more positive attitudes toward hard work than did the males.

4. Puerto Rican females demonstrated more initiative than did males of the culture.

5. Stateside females indicated they were more inner-directed than did Puerto Rican females, and the males of the two cultures reported themselves as less self-directed than did the females.

Implications

Treating both the conclusions and the contrary findings as outcome, the following implications for future research are suggested:

1. Some revamping of the anthropological descriptions of cross-cultural differences between Puerto Rico and continental United States as well as differences between the sexes within the two cultures appears necessary. The value system of Puerto Rican students, especially that of the female, is not as much at variance with stateside values as was reported in past literature. Moreover, females in both cultures appear to be assuming a more dominant, more independent role than in the past. These changes should be reflected in the design of future research.

2. Similar cross-cultural research in other Latin American societies would help differentiate between the impact of industrialization and the impact of United States sovereignty upon attitude and personality change in Puerto Rico. The present study does not permit drawing assumptions regarding the relative affect upon change of the two factors mentioned above or of some unknown factor.

3. The P-Scales could be improved for future research by adding items regarding the role of the sexes. Because of the small number of such items in the present study, no conclusions could be drawn regarding the relative valuing of the male and female roles in the two cultures.

4. Periodic replication of the present study would offer a longitudinal view of role and identity change in Puerto Rico. Such investigations would provide an assessment of the durability and intensity of the female attitude shift and of the development of any similar shift among males.

5. Research similar to the present study, incorporating samples of Puerto Rican immigrants in the states, would offer a new and valuable dimension to understanding the impact of culture upon attitudes and personality.

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APPENDIX A

CHI SQUARE VALUES

TABLE A.1.--Chi Square Values for Validation and Cross-Validation Samples: Michigan Males and Puerto Rican Males Individual Preference Scale

Item	Validation	Cross-Validation	p
1	35.178	96.801	.01
2	2.499	2.408	
3	12.729	3.889	
4	21.822	65.488	.01
5	56.969	13.557	.01
6	97.405	4.797	.20
7	16.402	29.436	.01
8	8.205	12.465	.05
9	4.186	37.400	
10	54.078	115.722	.01
11	8.446	17.678	.05
12	4.024	96.253	
13	53.569	5.436	.20
14	46.061	11.344	.01
15	0.972	2.621	
16	10.354	7.949	.05
17	42.087	19.549	.01
18	1.364	27.369	
19	4.473	64.117	
20	5.882	35.592	.20
21	18.906	21.958	.01
22	6.334	22.073	.10
23	1.975	45.278	
24	2.586	4.768	
25	4.693	15.131	.20
26	31.905	31.897	.01
27	3.935	34.679	
28	31.659	27.162	.01
29	33.040	18.265	.01
30	12.294	23.172	.01
31	7.791	92.986	.10
32	12.941	1.727	
33	16.369	89.772	.01
34	11.517	7.699	.10
35	51.500	11.505	.01
36	3.376	7.794	
37	11.217	16.302	.05
38	9.628	7.794	.10
39	4.027	48.494	
40	14.965	34.481	.01
41	4.801	2.808	
42	0.891	22.647	

TABLE A.1.--Continued

Item	Validation	Cross- Validation	p
43	9.260	68.623	.05
44	11.586	85.580	.01
45	7.706	42.349	.10
46	8.500	48.590	.05
47	34.856	12.706	.01
48	5.662	8.307	.20
49	0.402	9.910	
50	1.402	39.071	
51	8.976	9.613	.05
52	20.317	35.394	.01
53	9.176	74.697	.05
54	17.935	43.286	.01
55	22.836	53.151	.01
56	1.074	23.914	
57	3.438	129.042	
58	38.264	29.043	.01
59	6.392	7.256	.10
60	7.323	22.664	.10
61	21.576	16.995	.01
62	0.219	22.616	
63	18.337	33.796	.01
64	8.681	26.417	.05
65	12.980	42.578	.01
66	47.851	6.338	.10
67	12.233	11.394	.01
68	11.008	17.371	.05
69	5.609	42.250	.20
70	4.441	61.206	
71	35.134	68.521	.01
72	24.946	10.110	.05
73	7.591	20.052	.10
74	26.511	60.868	.01
75	69.215	59.533	.01
76	27.844	1.835	
77	26.897	8.587	.05
78	12.400	49.906	.01
79	36.447	70.926	.01
80	11.207	44.973	.05
81	5.020	25.282	.20
82	11.707	2.393	
83	30.790	27.560	.01
84	0.746	5.663	
85	16.148	77.951	.01
86	13.719	119.599	.01
87	39.155	16.035	.01

TABLE A.1.--Continued

Item	Validation	Cross- Validation	p
88	8.571	42.015	.05
89	3.051	10.350	
90	12.270	49.346	.01
91	12.971	29.717	.01
92	17.003	3.506	
93	7.296	91.590	.10
94	8.646	6.192	.20
95	3.823	18.456	
96	9.282	10.387	.05
97	4.825	75.179	.20
98	5.381	8.043	.20
99	22.401	16.939	.01
100	10.009	42.747	.05
101	9.047	102.438	.05
102	1.121	70.094	
103	12.213	44.703	.01
104	15.483	45.855	.01
105	17.576	119.302	.01
106	9.031	10.106	.05
107	14.193	8.460	.05
108	19.824	113.671	.01
109	4.483	13.937	
110	6.857	5.244	.20
111	2.302	25.739	
112	6.079		.20
113	9.387		.05
114	19.182		.01
115	5.090		.20
116	12.566		.01
117	25.956		.01
118	3.372		
119	6.452		.10
120	30.807		.01

TABLE A.2.--Chi Square Values for Validation and Cross-Validation Samples: Michigan Males and Puerto Rican Males
Generalized Situational Choice Inventory

Item	Validation	Cross-Validation	p
1	9.857	6.003	.05
2	1.380	3.457	
3	3.968	3.148	
4	12.101	36.415	.01
5	3.961	2.412	
6	0.327	0.000	
7	18.716	21.294	.01
8	12.166	21.935	
9	2.524	8.815	
10	0.463	2.452	.01
11	49.829	44.101	
12	8.312	7.306	
13	1.048	2.405	.05
14	1.463	4.546	
15	2.501	6.941	

TABLE A.3.--Chi Square Values for Validation and Cross-
Validation Samples: Michigan Males and Puerto Rican Males
Human Trait Inventory

Item	Validation	Cross- Validation	p
16	62.235	15.003	.01
17	21.788	11.299	.05
18	7.038	8.205	.10
19	99.414	22.211	.01
20	3.735	5.073	
21	7.812	46.786	.10
22	11.182	9.278	.05
23	6.863	16.494	.10
24	14.724	41.598	.01
25	0.944	21.618	
26	5.921	2.376	
27	2.856	5.245	
28	30.372	6.237	.20
29	33.062	18.440	.01
30	3.597	44.403	
31	104.888	19.892	.01
32	45.470	33.430	.01
33	14.711	36.151	.01
34	4.785	39.876	.20
35	22.472	30.951	.01
36	15.267	17.736	.01
37	36.396	16.320	.01
38	3.154	13.401	
39	55.664	16.989	.01
40	19.751	55.734	.01
41	25.320	35.302	.01
42	4.968	8.060	.20
43	22.835	13.757	.01
44	2.426	17.033	
45	45.072	9.308	.05
46	1.876	10.966	
47	16.561	14.048	.01
48	68.378	32.336	.01
49	20.532	16.964	.01
50	37.228	10.124	.05
51	4.341	10.885	
52	21.235	25.893	.01
53	11.646	10.872	.05
54	17.882	4.674	.20
55	3.242	5.540	
56	3.564	29.058	
57	93.692	5.722	.20

TABLE A.3.--Continued

Item	Validation	Cross- Validation	p
58	55.083	29.416	.01
59	78.815	4.393	
60	54.527	28.807	.01
61	15.488	50.945	.01
62	16.126	33.278	.01
63	14.226	5.713	.20
64	4.151	45.869	
65	13.361	13.665	.01
66	20.229	25.400	.01
67	32.199	30.349	.01
68	15.144	15.672	.01
69	No Item		
70	12.578	5.397	.20
71	15.727	23.485	.01
72	7.085	7.763	.10
73	6.793	10.081	.10
74	15.158	64.020	.01
75	No Item		
76	48.839	13.583	.01
77	4.796	12.151	.20
78	46.312	48.806	.01
79	77.196	13.185	.01
80	7.551	20.265	.10
81	23.521	28.908	.01
82	14.340	4.003	
83	16.627	7.816	.05
84	38.888	18.699	.01
85	33.926	8.287	.05
86	26.876	40.303	.01
87	11.726	51.260	.01
88	32.024	56.749	.01
89	10.061	12.701	.05
90	54.476	14.458	.01
91	11.026	25.052	.05
92	5.207	2.874	
93	31.867	9.614	.05
94	48.237	11.236	.05
95	42.752	43.044	.01
96	111.550	18.510	.01
97	6.486	5.386	.20
98	7.216	12.150	.10
99	44.664	4.202	
100	10.858	27.450	.05
101	19.139	35.091	.01
102	98.355	9.019	.05

TABLE A.4.--Chi Square Values for Validation and Cross-Validation Samples: Michigan Females and Puerto Rican Females

Individual Preference Scale

Item	Validation	Cross-Validation	p
1	55.633	47.741	.01
2	4.486	11.146	
3	14.531	9.802	.05
4	23.435	14.103	.01
5	67.604	43.738	.01
6	117.582	105.663	.01
7	35.289	24.169	.01
8	12.545	9.178	.05
9	1.092	6.826	
10	48.522	62.549	.01
11	14.318	9.913	.05
12	4.859	2.065	
13	54.053	49.623	.01
14	28.407	36.622	.01
15	2.865	5.879	
16	31.366	35.674	.01
17	53.481	58.649	.01
18	3.333	3.228	
19	7.047	9.070	.10
20	5.589	3.858	
21	5.476	2.778	
22	12.726	3.730	
23	6.214	6.419	.20
24	10.879	4.975	.20
25	7.006	2.522	
26	36.475	45.636	.01
27	8.794	5.691	.20
28	41.657	62.755	.01
29	38.711	32.011	.01
30	2.872	1.107	
31	5.289	5.147	.20
32	12.382	14.594	.01
33	20.155	1.225	.20
34	5.913	10.751	.20
35	71.102	75.066	.01
36	No Item - Puerto Rican Females		
37	5.198	0.710	
38	2.298	1.927	
39	1.803	1.370	
40	No Item - Puerto Rican Females		
41	45.251	27.510	.01
42	0.988	2.742	

TABLE A.4.--Continued

Item	Validation	Cross- Validation	p
43	1.188	2.882	
44	No Item - Puerto Rican Females		
45	10.663	19.773	.05
46	10.956	3.443	
47	27.677	14.072	.01
48	29.935	19.955	.01
49	7.206	2.064	
50	No Item - Puerto Rican Females		
51	4.092	2.274	
52	5.858	10.709	.20
53	40.167	29.799	.01
54	No Item - Puerto Rican Females		
55	17.236	24.407	.01
56	4.770	3.308	
57	3.814	6.440	
58	24.475	19.133	.01
59	5.711	14.888	.20
60	3.261	4.930	
61	2.276	12.683	
62	1.843	9.785	
63	No Item - Puerto Rican Females		
64	5.116	2.486	
65	No Item - Puerto Rican Females		
66	19.871	32.811	.01
67	No Item - Puerto Rican Females		
68	27.349	16.565	.01
69	2.083	5.890	
70	4.859	9.702	.20
71	51.861	46.857	.01
72	20.294	11.278	.05
73	6.478	14.791	.10
74	21.404	6.971	.10
75	8.389	4.839	.20
76	4.685	15.460	.20
77	23.331	41.980	.01
78	9.471	12.189	.05
79	34.441	32.489	.01
80	11.526	22.919	.01
81	19.610	9.616	.05
82	34.195	7.762	.10
83	27.671	39.724	.01
84	32.543	16.869	.01
85	5.165	3.835	
86	15.061	2.628	.01

TABLE A.4.--Continued

Item	Validation	Cross- Validation	p
87	53.491	24.976	.01
88	11.711	8.716	.05
89	6.589	5.703	.20
90	25.788	22.967	.01
91	7.821	6.891	.10
92	17.578	17.964	.01
93	13.129	5.965	.20
94	14.229	18.365	.01
95	16.775	7.724	.10
96	9.069	24.516	.05
97	5.694	3.153	
98	0.459	3.458	
99	8.804	16.198	.05
100	19.342	16.465	.01
101	3.047	8.068	
102	8.368	1.448	
103	23.495	17.498	.01
104	18.078	10.537	.05
105	2.836	5.563	
106	43.243	16.124	.01
107	6.788	7.689	.10
108	18.168	14.753	.01
109	9.890	14.838	.05
110	7.743	10.135	.10
111	8.494	7.504	.10
112	5.507	11.136	.20
113	16.625	17.338	.01
114	7.341	9.645	.10
115	4.052	5.710	
116	37.490	32.025	.01
117	6.080	8.544	.20
118	2.595	2.184	
119	4.107	6.804	
120	33.179	19.773	.01

TABLE A.5.--Chi Square Values for Validation and Cross-Validation Samples: Michigan Females and Puerto Rican Females
Generalized Situational Choice Inventory

Item	Validation	Cross-Validation	p
1	3.131	8.333	
2	4.667	1.986	
3	7.911	7.364	.05
4	20.731	19.940	.01
5	12.374	6.366	.05
6	1.003	5.913	
7	39.445	18.750	.01
8	22.281	21.569	.01
9	1.839	13.315	
10	3.639	1.342	
11	15.054	20.429	.01
12	0.479	3.269	
13	1.291	2.000	
14	0.997	2.169	
15	7.638	2.822	

TABLE A.6.--Chi Square Values for Validation and Cross-Validation Samples: Michigan Females and Puerto Rican Females

Human Trait Inventory

Item	Validation	Cross-Validation	p
16	28.598	15.401	.01
17	13.054	13.433	.01
18	5.202	5.682	.20
19	6.605	6.803	.10
20	4.260	2.772	
21	71.864	88.081	.01
22	20.483	9.086	.05
23	45.927	38.114	.01
24	71.993	69.067	.01
25	32.965	21.212	.01
26	4.254	7.712	
27	17.075	19.709	.01
28	10.389	2.861	
29	34.202	14.051	.01
30	53.480	33.103	.01
31	31.847	23.529	.01
32	29.684	45.759	.01
33	28.552	51.306	.01
34	29.239	42.141	.01
35	48.015	30.425	.01
36	19.556	3.183	
37	30.107	21.809	.01
38	9.763	8.322	.05
39	37.359	26.430	.01
40	62.823	42.485	.01
41	60.229	65.641	.01
42	16.210	4.277	
43	17.255	17.791	.01
44	29.596	26.898	.01
45	26.945	20.100	.01
46	10.010	28.519	.05
47	21.327	41.327	.01
48	46.051	46.371	.01
49	18.520	12.355	.01
50	21.972	19.282	.01
51	3.568	11.368	.01
52	30.846	52.219	.01
53	11.317	21.525	.05
54	7.116	8.036	.10
55	13.979	7.466	.10
56	35.389	11.893	.01
57	12.850	5.036	.20

TABLE A.6.--Continued

Item	Validation	Cross- Validation	p
58	26.702	25.129	.01
59	7.106	8.323	.10
60	30.157	37.584	.01
61	54.111	49.239	.01
62	37.617	32.425	.01
63	6.393	8.595	.10
64	46.156	36.045	.01
65	24.025	35.210	.01
66	32.342	30.225	.01
67	22.106	17.646	.01
68	20.437	15.230	.01
69	39.633	7.942	.05
70	8.913	10.853	.05
71	20.751	10.718	.05
72	6.895	9.746	.10
73	50.494	30.079	.01
74	22.201	4.781	.20
75	28.810	15.292	.01
76	5.075	2.419	
77	19.769	9.061	.05
78	36.001	51.000	.01
79	5.261	13.554	.20
80	35.479	28.022	.01
81	21.177	39.262	.01
82	12.311	20.504	.01
83	8.635	14.501	.05
84	8.609	15.716	.05
85	19.953	14.985	.01
86	19.607	18.239	.01
87	27.697	31.723	.01
88	82.072	107.794	.01
89	12.343	28.767	.01
90	18.397	30.866	.01
91	42.377	16.049	.01
92	4.463	10.160	
93	18.139	10.793	.01
94	11.276	7.754	.10
95	48.798	33.060	.01
96	25.227	22.653	.01
97	23.775	10.922	.01
98	13.631	9.443	.05
99	4.990	3.358	
100	36.353	17.028	.01
101	20.982	29.926	.01
102	5.843	19.872	.20

TABLE A.7.--Chi Square Values for Validation and Cross-Validation Samples: Michigan Males and Michigan Females Individual Preference Scale

Item	Validation	Cross-Validation	p
1	6.078	6.590	.20
2	3.907	0.158	
3	0.003	3.174	
4	0.935	9.030	
5	2.907	4.723	
6	0.705	1.993	
7	2.832	0.498	
8	2.820	2.651	
9	7.181	2.053	
10	2.896	3.400	
11	0.280	0.194	.05
12	0.622	2.750	
13	1.037	2.149	
14	3.015	4.298	
15	5.314	0.525	
16	9.352	9.077	
17	4.354	3.549	
18	2.378	9.020	
19	12.898	8.748	
20	4.670	6.421	.20
21	2.574	3.077	
22	10.046	1.549	
23	7.687	2.220	
24	9.901	6.189	
25	3.560	1.903	
26	1.700	7.414	
27	6.204	6.651	
28	2.969	0.793	
29	3.966	1.670	.20
30	5.476	9.165	
31	1.545	2.457	
32	3.959	4.018	
33	10.989	2.113	
34	4.742	8.280	
35	2.068	4.573	
36	2.314	2.418	
37	4.709	1.739	
38	3.376	3.741	.01
39	5.721	3.427	
40	24.517	35.756	
41	1.082	5.279	
42	2.640	4.078	

TABLE A.7.--Continued

Item	Validation	Cross- Validation	p
43	0.621	5.643	
44	3.884	0.373	
45	5.129	3.301	
46	9.542	1.503	
47	12.039	8.513	.05
48	3.114	8.106	
49	14.690	5.862	.20
50	2.075	1.654	
51	2.354	2.909	
52	1.870	10.462	
53	4.110	4.158	
54	5.400	10.802	.20
55	4.485	8.615	
56	3.106	2.104	
57	2.917	3.944	
58	3.604	0.074	
59	5.381	3.252	
60	9.567	7.050	.10
61	10.251	3.562	
62	13.186	7.099	.10
63	7.034	7.112	.10
64	2.606	2.373	
65	13.833	5.326	.20
66	2.149	7.137	
67	13.035	12.856	.01
68	2.007	0.643	
69	2.675	3.006	
70	1.240	4.373	
71	5.589	6.276	.20
72	3.174	1.715	
73	2.474	1.031	
74	6.089	6.430	.20
75	3.763	2.038	
76	2.694	1.986	
77	1.105	3.315	
78	8.097	5.939	.20
79	5.702	2.802	
80	0.515	5.964	
81	8.999	1.367	
82	0.487	4.809	
83	1.685	5.043	
84	19.754	3.008	
85	9.487	0.973	
86	5.970	4.746	.20

TABLE A.7.--Continued

Item	Validation	Cross- Validation	p
87	7.504	0.553	
88	1.622	2.502	
89	1.307	1.329	
90	4.504	6.799	
91	3.043	3.548	
92	3.835	3.921	
93	10.470	1.947	
94	4.370	6.546	
95	8.113	5.309	.20
96	1.537	8.303	
97	9.879	7.522	.10
98	7.828	4.797	.20
99	4.343	1.860	
100	4.186	6.597	
101	7.073	9.902	.10
102	2.393	1.712	
103	7.405	9.534	.10
104	3.439	1.655	
105	7.264	8.686	.10
106	10.814	19.897	.05
107	5.265	0.214	
108	4.622	9.013	
109	5.315	13.100	.20
110	2.261	3.544	
111	7.522	10.295	.10
112	4.990	6.856	.20
113	4.330	5.661	
114	5.061	0.814	
115	4.360	2.759	
116	3.331	0.156	
117	7.605	3.771	
118	3.037	4.764	
119	4.263	3.036	
120	1.272	2.402	

TABLE A.8.--Chi Square Values for Validation and Cross-Validation Samples: Michigan Males and Michigan Females
Generalized Situational Choice Inventory

Item	Validation	Cross-Validation	p
1	6.829	3.030	
2	0.427	0.027	
3	2.893	5.241	
4	2.476	2.102	
5	0.796	1.854	
6	3.675	1.050	
7	0.021	0.512	
8	2.185	2.977	
9	0.595	5.007	
10	0.082	4.143	
11	26.225	8.515	.05
12	0.070	1.299	
13	2.604	0.046	
14	9.259	5.073	
15	1.164	4.119	

TABLE A.9.--Chi Square Values for Validation and Cross-Validation Samples: Michigan Males and Michigan Females Human Trait Inventory

Item	Validation	Cross-Validation	p
16	3.183	4.568	
17	4.253	1.412	
18	20.719	21.403	.01
19	18.276	11.879	.01
20	2.050	1.646	
21	3.858	7.101	
22	1.944	2.907	
23	3.715	6.327	
24	1.963	1.886	
25	0.625	1.054	
26	1.741	3.024	
27	1.649	3.700	
28	9.196	5.238	.20
29	32.969	21.875	.01
30	2.400	2.037	
31	10.311	4.969	.20
32	1.194	5.909	
33	11.600	8.902	.05
34	2.399	1.552	
35	2.283	11.329	
36	2.506	5.186	
37	2.474	0.322	
38	5.570	2.464	
39	3.641	6.449	
40	2.825	2.315	
41	3.555	2.826	
42	3.513	0.388	
43	0.106	3.913	
44	2.418	3.299	
45	9.367	6.799	.10
46	2.140	8.520	
47	0.141	6.914	
48	6.602	2.223	
49	2.054	2.014	
50	5.958	2.355	
51	2.526	1.468	
52	8.166	3.494	
53	2.208	2.664	
54	9.739	3.830	
55	4.725	4.294	
56	5.798	1.715	
57	0.881	6.252	

TABLE A.9.--Continued

Item	Validation	Cross- Validation	p
58	1.140	4.008	
59	7.262	14.659	.10
60	18.735	9.570	.05
61	12.293	10.334	.05
62	3.215	2.617	
63	9.016	6.034	.20
64	0.985	7.096	
65	4.644	4.095	
66	3.914	3.263	
67	3.542	1.986	
68	11.277	3.556	
69	3.666	7.061	
70	6.998	9.821	.10
71	8.505	3.521	
72	2.680	5.659	
73	0.956	3.353	
74	3.922	4.294	
75	4.107	5.459	
76	8.060	10.144	.05
77	17.039	2.920	
78	2.031	0.304	
79	2.031	2.693	
80	2.513	3.619	
81	4.073	2.909	
82	10.604	4.278	
83	3.518	2.970	
84	3.759	4.689	
85	2.794	9.459	
86	4.443	5.890	
87	1.333	2.638	
88	14.996	14.284	.01
89	5.540	1.765	
90	3.360	0.591	
91	3.986	2.582	
92	5.313	5.456	.20
93	9.880	0.825	
94	3.410	5.279	
95	9.141	4.267	
96	0.576	3.441	
97	5.553	7.403	.20
98	0.658	3.445	
99	10.366	1.581	
100	7.772	4.563	
101	6.789	3.046	
102	5.261	1.269	

TABLE A.10.--Chi Square Values for Validation and Cross-Validation Samples: Puerto Rican Males and Puerto Rican Females

Individual Preference Scale

Item	Validation	Cross-Validation	p
1	2.337	41.679	
2	3.647	13.073	
3	0.530	4.701	
4	4.271	23.045	
5	6.750	19.155	.10
6	2.572	114.508	
7	9.018	7.540	.10
8	0.893	25.175	
9	3.243	46.889	
10	6.244	27.604	.20
11	5.474	38.298	.20
12	11.929	88.631	.01
13	1.958	35.127	
14	4.258	53.137	
15	9.273	1.861	
16	4.375	9.748	
17	5.389	12.521	.05
18	1.386	9.653	
19	9.110	24.741	.05
20	6.307	40.505	.10
21	4.562	13.315	
22	2.144	12.288	
23	7.254	42.054	.10
24	2.702	5.424	
25	9.590	5.092	.20
26	1.362	26.885	
27	11.305	65.457	.05
28	2.149	13.813	
29	1.427	6.376	
30	0.037	10.682	
31	3.865	88.166	
32	7.000	3.957	
33	1.885	64.498	
34	2.170	8.480	
35	0.523	32.499	
36	No Item		
37	2.857	20.456	
38	3.997	11.918	
39	6.912	41.156	.10
40	No Item		
41	18.756	24.253	.01
42	3.917	30.412	

TABLE A.10.--Continued

Item	Validation	Cross- Validation	p
43	7.234	74.438	.10
44		No Item	
45	7.111	10.162	.10
46	6.774	38.696	.10
47	0.650	16.871	
48	3.379	5.440	
49	5.862	1.323	
50		No Item	
51	0.416	7.471	
52	15.148	17.072	.01
53	6.740	43.786	.10
54		No Item	
55	4.284	26.329	
56	7.037	28.916	
57	8.166	103.292	.05
58	1.006	5.368	
59	4.093	1.576	
60	7.936	26.503	.05
61	3.446	36.049	
62	11.084	28.401	.05
63		No Item	
64	3.494	30.348	
65		No Item	
66	10.189	53.857	.05
67		No Item	
68	6.824	32.955	.10
69	3.781	41.810	
70	6.943	43.385	.10
71	5.513	119.874	
72	1.523	15.496	
73	2.109	3.400	
74	7.487	77.397	.10
75	52.804	33.801	.01
76	11.545	26.175	.01
77	3.396	41.905	
78	4.800	83.956	.20
79	1.360	27.286	
80	0.935	10.928	
81	7.957	18.911	.05
82	10.624	11.545	.05
83	0.117	77.759	
84	1.091	7.956	
85	4.167	60.844	
86	3.112	49.497	

TABLE A.10.--Continued

Item	Validation	Cross- Validation	p
87	2.657	7.230	
88	0.114	87.183	
89	5.403	2.530	
90	1.578	17.059	
91	2.702	24.548	
92	7.656	26.717	.10
93	1.059	66.048	
94	2.940	11.570	
95	2.713	11.889	
96	4.043	2.995	
97	9.920	95.282	.05
98	0.749	0.343	
99	16.964	8.345	.05
100	1.691	12.909	
101	5.825	91.873	.20
102	7.295	58.132	.10
103	0.481	33.270	
104	3.171	67.221	
105	2.711	113.865	
106	6.235	11.580	.20
107	2.254	5.946	
108	0.556	81.503	
109	3.653	8.293	
110	2.838	8.098	
111	8.764	19.892	.05
112	11.671	No Calculation	.01
113	4.871	No Calculation	.20
114	0.749	No Calculation	
115	4.427	No Calculation	
116	4.219	No Calculation	
117	6.430	No Calculation	.10
118	1.587	No Calculation	
119	1.977	No Calculation	
120	8.921	No Calculation	.05

TABLE A.11.--Chi Square Values for Validation and Cross-Validation Samples: Puerto Rican Males and Puerto Rican Females

Generalized Situational Choice Inventory

Item	Validation	Cross-Validation	p
1	1.713	7.254	
2	5.482	1.007	
3	3.464	3.798	
4	8.997	2.027	
5	3.934	2.027	
6	5.233	5.918	.20
7	6.731	1.279	
8	2.729	2.475	
9	4.000	11.082	
10	2.466	2.977	
11	5.128	1.354	
12	6.494	3.187	
13	1.272	1.005	
14	12.232	3.730	
15	7.880	0.854	

TABLE A.12.--Chi Square Values for Validation and Cross-Validation Samples: Puerto Rican Males and Puerto Rican Females

Human Trait Inventory

Item	Validation	Cross-Validation	p
16	20.870	8.752	.05
17	14.022	0.323	
18	32.693	11.794	.01
19	110.337	3.612	
20	4.660	1.925	
21	68.452	4.292	
22	11.047	0.378	
23	23.883	3.782	
24	71.068	6.257	.10
25	34.730	1.662	
26	12.570	2.838	
27	27.266	15.906	.01
28	60.706	0.662	
29	18.863	11.361	.01
30	65.356	5.895	.20
31	47.324	5.608	.20
32	102.114	1.831	
33	31.967	7.654	.10
34	53.888	3.847	
35	9.541	8.496	.05
36	18.101	11.161	.05
37	39.613	2.801	
38	8.408	4.021	
39	81.207	45.093	.01
40	25.254	2.750	
41	101.654	8.394	.05
42	8.239	3.857	
43	35.575	2.264	
44	45.786	3.398	
45	94.300	0.784	
46	6.889	0.761	
47	4.976	3.287	
48	6.026	3.428	
49	48.422	1.924	
50	18.508	5.374	.20
51	7.585	3.025	
52	53.771	3.393	
53	23.314	5.284	.20
54	26.786	2.178	
55	8.729	9.661	.05
56	27.998	3.753	
57	71.237	4.562	

TABLE A.12.--Continued

Item	Validation	Cross- Validation	p
58	69.051	4.187	
59	90.969	3.530	
60	12.871	9.185	.05
61	114.840	14.010	.01
62	11.816	4.263	
63	5.152	0.384	
64	55.286	4.668	.20
65	32.911	10.979	.05
66	59.099	3.848	
67	88.465	2.405	
68	13.530	4.887	.20
69	No Item		
70	18.257	8.702	.05
71	17.916	5.807	.20
72	25.356	2.271	
73	52.845	13.543	.01
74	7.586	36.258	.10
75	No Item		
76	98.121	1.830	
77	12.829	4.130	
78	84.052	3.967	
79	44.803	2.829	
80	23.482	2.157	
81	66.315	6.778	.10
82	7.306	14.015	.10
83	13.100	8.578	.05
84	11.538	4.812	
85	12.222	2.318	
86	68.589	1.927	
87	54.671	7.595	.10
88	23.635	8.113	.05
89	6.713	5.365	.20
90	67.556	8.229	.05
91	13.878	1.478	
92	8.330	4.418	
93	55.602	4.679	.20
94	30.827	3.031	
95	73.983	8.472	.05
96	107.582	6.309	.10
97	7.367	2.628	
98	5.018	3.094	
99	74.528	7.334	.10
100	14.410	1.860	
101	7.630	1.570	
102	89.201	1.241	

APPENDIX B

FACTORS RELATED TO FOUR
GENERAL AREAS OF INVESTIGATION

TABLE B.1.--Factors Related to the General Area of Authority Relations

Authority Relations

Authoritarian Orientation

Michigan Males - Puerto Rican Males

Factor I : Parental pressure

Factor IV: Parental valuing

Michigan Females - Puerto Rican Females

Factor I : Maternal pressure

Factor V : Authority relations

Factor VI: Paternal pressure

Michigan Males - Michigan Females

No relevant factor emerged

Puerto Rican Males - Puerto Rican Females

Factor I : Educational destiny

TABLE B.2.--Factors Related to the General Area of Work Orientation

Work Orientation
<u>Value Held of Hard Work</u>
Michigan Males - Puerto Rican Males No relevant factor emerged
Michigan Females - Puerto Rican Females Factor IV : Work orientation
Michigan Males - Michigan Females Factor III: Work orientation
Puerto Rican Males - Puerto Rican Females Factor VI : Work orientation
<u>Value of Initiative and Independence</u>
Michigan Males - Puerto Rican Males Factor II : Extrinsic versus intrinsic achievement
Michigan Females - Puerto Rican Females No relevant factor emerged
Michigan Males - Michigan Females No relevant factor emerged
Puerto Rican Males - Puerto Rican Females Factor II : Achievement orientation

TABLE B.3.--Factors Related to the General Area of Implicit World View

Implicit World View	
<u>Value of Academic Achievement</u>	
Michigan Male - Puerto Rican Male	
Factor I :	Parental pressure
Factor IV :	Parental valuing
Michigan Females - Puerto Rican Females	
Factor II :	Educational destiny
Factor VII:	Achievement performance
Michigan Males - Michigan Females	
Factor I :	Educational destiny
Puerto Rican Males - Puerto Rican Females	
Factor I :	Educational destiny
Factor III:	Academic orientation
<u>Source of Success</u>	
Michigan Males - Puerto Rican Males	
No relevant factor emerged	
Michigan Females - Puerto Rican Females	
Factor II :	Educational destiny
Michigan Males - Michigan Females	
Factor II :	Extrinsic versus intrinsic achievement
Factor VI :	School orientation
Puerto Rican Males - Puerto Rican Females	
No relevant factor emerged	

TABLE B.4.--Factors Related to the General Area of Personality

 Personality

Withdrawal

Michigan Males - Puerto Rican Males
No relevant factor emerged

Michigan Females - Puerto Rican Females
No relevant factor emerged

Michigan Males - Michigan Females
No relevant factor emerged

Puerto Rican Males - Puerto Rican Females
Factor IV : Social orientation

Reality Testing

Michigan Males - Puerto Rican Males
No relevant factor emerged

Michigan Females - Puerto Rican Females
No relevant factor emerged

Michigan Males - Michigan Females
Factor V : Role identification

Puerto Rican Males - Puerto Rican Females
No relevant factor emerged

Inner - Directedness

Michigan Males - Puerto Rican Males
Factor III: Social orientation

Michigan Females - Puerto Rican Females
Factor III: Social orientation

Michigan Males - Michigan Females
Factor III: Social orientation

Puerto Rican Males - Puerto Rican Females
Factor IV : Social orientation

TABLE B.4.--Continued

Personality

Long-Term Goals

Michigan Males - Puerto Rican Males
No relevant factor emerged

Michigan Females - Puerto Rican Females
Factor II: Educational destiny

Michigan Males - Michigan Females
No relevant factor emerged

Puerto Rican Males - Puerto Rican Females
Factor V : Mobility through education