

NATURE AND DETERMINANTS OF ATTITUDES TOWARD
EDUCATION AND TOWARD PHYSICALLY DISABLED PERSONS
IN COLOMBIA, PERU, AND THE UNITED STATES

Thesis for the Degree of Ph. D.
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ABSTRACT

NATURE AND DETERMINANTS OF ATTITUDES TOWARD EDUCATION AND TOWARD PHYSICALLY DISABLED PERSONS IN COLOMBIA, PERU, AND THE UNITED STATES

by Eugene Wesley Friesen

The major focus of the study was on the relationship between interpersonal values, personal contact, attitudes, and certain demographic variables. The assumption was made that both value and contact serve as determinants of attitudes.

The study was conducted in Lima, Peru, Bogota, Colombia, and Wichita, Kansas in 1965.¹ A battery of five research instruments consisted of: (a) attitudes-toward education scale, (b) the Gordon Survey of Interpersonal Values, (c) the personal questionnaire, (d) attitudes-toward-handicapped-persons scale, and (e) the personal questionnaire (handicapped persons). Respondents were selected from known occupational groupings in society: (a) special education and rehabilitation (SER), (b) education (E), (c) low income (L), and managerial and executives (M). The test battery was administered to 134 adults in Peru and 241 adults in Colombia. Administration time was approximately two hours.

¹ The Kansas sample was gathered as one of the sub-samples of a broader study by Messieurs Dickie and Weir and their complete studies will appear as doctoral theses under the direction of Dr. John E. Jordan at Michigan State University.

The theoretical reference for hypothesis construction was social-psychological, specifically relating to intergroup attitude as influenced by interpersonal values and contact variables such as frequency, enjoyment, and ease of avoidance. As predicted, there was a significant positive relationship between contact frequency and favorable attitude scores toward handicapped persons as well as between contact frequency and scores on the progressive educational attitude scale in both Colombia and Peru. However, the hypothesis relating to contact frequency and traditional attitudes toward education was not supported in either Colombia or Peru.

It was hypothesized that the SER group would be characterized by an asset value orientation rather than a comparative value orientation in terms of the way that physical disability was viewed. The Benevolence sub-scale of the Gordon scale of values was used as a measure of asset value orientation while the Leadership and Recognition sub-scales were used to measure a comparative value orientation. The SER group did tend to score significantly higher on Benevolence value as well as lower on Leadership and Recognition value than did the other occupational groups.

It was also hypothesized that the SER would have more favorable scores on the attitude-toward-disability scale than other occupational groups. The hypothesis was confirmed for Colombia

but not for Peru. The Kansas sample had more favorable attitude scores toward handicapped persons than did Colombia. Colombia had more favorable attitude scores toward handicapped persons than did Peru. This finding was in keeping with the theoretical model of the study.

However, the SER group did not have significantly higher progressive educational scores than did the other occupational groups of the study. None of the SER comparisons proved significant on either progressive or traditional attitudes toward education.

A major research task was the development of a rationale and technique for cross-national concept comparability. Dr. John E. Jordan, the major advisor to this study, carefully went over each item of the instruments with the translators before the instruments were separately translated into Colombia and Peruvian Spanish.

An effort was made to achieve attitude unidimensionality as defined by Guttman scale item-respondent ordering. It was predicted that attitude items would form Guttman scales and that the relationship between content and intensity components of the attitude items would be U or J-shaped in form. These predictions were not supported.

It was assumed that scaling was not successful primarily because of the complexities related to attitude measurement. It was recommended that the problem of cross-cultural comparability be approached via Guttman's facet theory (1959, 1961) in future studies. This theory suggests that the attitude universe represented by the item content can be substructured into components which are systematically related according to the number of identical conceptual elements they hold in common. The substructuring of relationships between various components of the attitude universe thus allows for meaningful cross-national comparisons.

Statistical techniques included analysis-of-variance, multiple regressions, and the Guttman-Lingoes Multiple Scale Analysis. It was recommended that the Guttman-Lingoes Multiple Scale Analysis - I (1965), which allows for multidimensional analysis of data in addition to multi-unidimensional analysis, be used in future studies.

Various value, attitude, and demographic comparisons were made between sex and occupational groupings. A finding of general interest was that males were significantly lower than females in Benevolence value scores--a finding consistent with Felty's (1965) study in Costa Rica and previous findings in other nations.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	xi
LIST OF FIGURES	xxiii
LIST OF APPENDICES	xxiv
Chapter	
I. INTRODUCTION	1
Nature of the Problem	1
Statement of the Problem	8
Definition of Terms	10
Organization of the Thesis	15
II. REVIEW OF THEORY AND RELATED RESEARCH	17
A Theoretical Framework for Attitudes Toward Education	17
Attitudes Toward Disability - A Theoretical Framework	26
The Relationship of Values and Personal Contact to Attitudes	29
Some Research Findings	29
The Value Question	29
Value Variation Among Groups	32
Value Variations of Rehabilitation Groups in Latin America	33
Attitude Intensity	36
Personal Contact	37
Empirical Research on Attitudes Toward the Physically Disabled	39
General Studies	40
Social Contact and Information Studies	40
Cross Cultural Studies	41

Chapter	Page
Further Cultural Studies	45 ✓
Types of Disability - Further Studies . . .	46 ✓
The Measurement of Attitudes	48
General Consideration	48
Cross-National Research and Scale Analysis .	50
Scale Analysis	51
Scale and Intensity Analysis in Relation to Cross-National Problem of Comparability of Responses	55

III. METHODOLOGY AND PROCEDURES

Rational for Selecting Samples from Colombia and Peru	57
General Description of Colombia	58
Geography	58
Population	59
Economics	60
Politics	61
Education	61
Special Education and Rehabilitation Services	63
General Description of Peru	65
Population	66
Economics	67
Government	68
Education	68
Special Education and Rehabilitation Services	71
Research Population	72
Colombian Sample	72
Peruvian Sample	73
United States Sample: Kansas	74
Selection of Variables	74
Attitudes Toward Physical Disability	75
Attitudes Toward Education	76
The Intensity Scales	77
Interpersonal Values	78
Personal Contact Variables	80
Contact with Education	81
Contact with Physically Disabled	81

Chapter	Page
Preference for Personal Relationships	82
Institutional Satisfaction	83
Change Orientation	83
Religiosity	84
Demographic Variables	84
Collection of Data	85
Statistical Procedures	86
Descriptive	86
Scale and Intensity Analysis	86
Mean Differences Analysis	88
Relational and/or Predictive Analysis	90
Major Research Hypothesis	92
Hypothesis Related to Scaling	92
Hypothesis Related to Contact Frequency, Intensity, and Attitude Scores	94
Hypothesis Related to Attitude and Value Scores	96
Hypothesis Related to Change Orientation and Attitude Scores	98
Hypothesis Related to Characteristics of Those Working Directly with Disabled Per- sons (SER)	99
Limitation of the Study	102

IV. ANALYSIS OF THE DATA

Section 1: Descriptive Data	107
Differences in Mean Education, Income, and Age Scores Between Interest Groups, Male, and Female Respond- ents for Colombia, Peru, and Kansas Summary of Descriptive Data in Tables 3-16	112
Section 2: Hypotheses Testing, Mean Differences, and Correlational Analyses	122
H:1	124
H:2	125
Colombia: H:3a	126
Colombia: H:3b	127
Peru: H:3a	130
Peru: H:3b	131

Chapter	Page
Colombia: H:4a	134
Peru: H:4a	134
Colombia: H:4b	135
Peru: H:4b	135
Colombia: H:5a	138
Colombia: H:5b	138
Peru: H:5a	140
Peru: H:5b	141
Colombia: H:6a	143
Colombia: H:6b	144
Peru: H:6a	146
Peru: H:6b	147
Colombia: H:7a	148
Colombia: H:7b	149
Peru: H:7a	151
Peru: H:7b	151
Colombia: H:7c	153
Peru: H:7c	155
Colombia: H:8a	157
Peru: H:8a	157
Colombia: H:8b	157
Peru: H:8b	157
Summary of Zero-Order Correlations Between Attitudes and Values in Colombia	160
Summary of Zero-Order Correlations Between Attitudes and Values in Peru	164
Hypothesis Related to Characteris- tics of Persons Working Directly with Disabled Persons (the SER Group)	167
Colombia (H-9a)	167
Peru (H-9a)	167
Country Comparisons (H-9b)	169
Colombia (H-10)	171
Peru (H-10)	174
Country Comparisons	178
Summary of Hypothesis 10 Analyses .	181
Colombia (H-11a)	182
Colombia (H-11b)	183

Peru (H-11a)	184
Peru (H-11b)	185
Country Comparisons (H-11a) . . .	186
Country Comparisons (H-11b) . . .	187
Colombia (H-12)	188
Summary for H-12 in Colombia . . .	189
Peru (H-12)	192
Colombia (H-13)	194
Peru (H-13)	195
Differences Between the Various Occu- pational Groups on Mean Scores on the Value Sub-Scales	197
Sex Differences as Indicated by Mean Scores on the Value Sub-Scales . .	202
Colombia	202
Peru	202
Differences Between Male and Female Scores on Attitude Variables . . .	205
Colombia	205
Peru	205

V. SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Part I: Summary of the Theoretical and Methodo- logical Issues	209
Summary of Theory	209
Hypotheses Construction	211
Technical Problems	212
Instruments	216
Sample	218
Summary of Statistical Procedures	219
Part II: Discussion of the Hypotheses	220
Hypothesis Relating to Contact Frequency and Intensity (H:3)	222
Colombia	222
Peru	227
Contact Variables and their Relationship to Favorable Attitudes (H:4)	228
Value Variables in Relation to Attitudes (H:5 - H:7)	230

Attitude Scores as Related to Change	
Variables (HP:8 and H:12)	232
Colombia	233
Peru	235
Discussion of Group Differences on Value	
Scores and Attitude Scores in	
Colombia, Peru, and Kansas (H:9-H:11).	236
Colombia	236
Peru	238
Cross National SER Comparisons	240
Part III: Recommendations	242
Relating to the Instruments	242
Relating to the Sample	250
Relating to Analyses Procedures	251
Concluding Summary	252
References	256

LIST OF TABLES

Table	Page
1. Distribution of respondents according to sex and occupational characteristics from Colombia, Peru, and Kansas	108
2. Occupational composition of total sample by sex and interest group for Peru, Colombia, and Kansas . . .	109
3. Comparison of mean differences, standard deviations and <u>F</u> statistics in respect to three demographic variables for three occupational categories in Colombia	114
4. Duncan's New Multiple Range Test applied to means of education scores for three occupational categories in Colombia	115
5. Duncan's New Multiple Range Test applied to means of income scores for three occupational groups in Colombia	116
6. Duncan's New Multiple Range Test applied to means of age scores for three occupational categories in Colombia	116
7. Comparison of mean differences, standard deviations, and <u>F</u> statistics in respect to three demographic variables in Colombia	117
8. Comparison of mean differences, standard deviations, and <u>F</u> statistics in respect to three demographic variables for four occupational categories in Peru	118
9. Duncan's New Multiple Range Test applied to means of education scores for four occupational categories in Peru	App. A

10.	Duncan's New Multiple Range Test applied to means of age scores for four occupational categories in Peru	App. A
11.	Comparison of mean differences, standard deviations, and <u>F</u> statistics in respect to three demographic variables for males and females in Peru . .	119
12.	Comparison of mean differences, standard deviations, and <u>F</u> statistics in respect to education and age for respondents working in the area of SER in Colombia, Peru, and Kansas	120
13.	Duncan's New Multiple Means Test analysis of education for respondents working in the area of SER in Colombia, Peru, and Kansas	App. A
14.	Duncan's New Multiple Means Test analysis of age for respondents working in the area of SER in Colombia, Peru, and Kansas	App. A
15.	Comparison of mean differences, standard deviations, and <u>F</u> statistics in respect to three demographic variables for males and females in Kansas .	App. A
16.	Interpretation of education scores in terms of actual educational attainment	122
17.	Means, standard deviations, and <u>F</u> statistic comparing high and low frequency of contact with disabled persons with intensity scores on the ATDP scale in Colombia	126
18.	Means, standard deviations, and <u>F</u> statistic comparing high and low frequency of contact with education with intensity scores on the progressive-attitude-toward-education scale for Colombia	127
19.	Means, standard deviations, and <u>F</u> statistic comparing high and low frequency of contact with education with intensity scores on the traditional-attitude-toward-education scale for Colombia	128

20.	Zero-order correlations between content and intensity scores on the attitude scales for the occupational groups in Colombia	129
21.	Means, standard deviations, and <u>F</u> statistic comparing high and low frequency of contact with disabled persons with intensity scores on the ATDP scale in Peru	131
22.	Means, standard deviations, and <u>F</u> statistic comparing high and low frequency of contact with education with intensity scores on the progressive-attitude-toward-education scale for Peru	132
23.	Means, standard deviations, and <u>F</u> statistic comparing high and low frequency of contact with education with intensity scores on the traditional-attitude-toward-education scale for Peru	132
24.	Zero-order correlations between content and intensity scores on the attitude scales for the occupational groups in Peru	133
25.	Multiple correlations for combined contact variables with attitudes toward disabled persons and toward education (progressive and traditional) in Colombia and Peru	136
26.	Partial correlations between attitude-toward-handicapped persons and attitudes toward education (both progressive and traditional) as related to contact variables for Colombia and Peru	137
27.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Leadership value and attitudes toward disabled persons for Colombia	138
28.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Leadership value and progressive-attitude-toward-education scale for Colombia	139

29.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Leadership value and traditional-attitude-toward-education scale for Colombia	140
30.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Leadership value and attitudes toward handicapped persons in Peru . . .	141
31.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Leadership value and progressive-attitude-toward-education scale in Peru	142
32.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Leadership value and traditional-attitude-toward-education scale in Peru	143
33.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Recognition value and scores on the attitude-toward-handicapped-persons-scale for Colombia	144
34.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Recognition value and scores on the progressive-attitude-toward-education scale for Colombia	145
35.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Recognition value and scores on the traditional-attitude-toward-education scale for Colombia	145
36.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Recognition value and scores on the ATDP scale for Peru	146
37.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Recognition value and scores on the progressive-attitude-toward-education scale for Peru	147

38.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Recognition value and scores on the traditional-attitude-toward-education scale for Peru	148
39.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Benevolence value and scores on the ATDP scale for Colombia	149
40.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Benevolence value and scores on the progressive-attitude-toward-education scale in Colombia	150
41.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Benevolence value and scores on the traditional-attitude-toward-education scale in Colombia	150
42.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Benevolence value on the attitude-toward-handicapped-persons scale in Peru .	151
43.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Benevolence value and scores on the progressive-attitude-toward-education scale for Peru	152
44.	Means, standard deviations, and <u>F</u> statistic comparing high and low scores on Benevolence value and scores on traditional-attitude-toward-education scale for Peru	153
45.	Means, standard deviations, and <u>F</u> statistic for Benevolence scores, handicapped persons scale scores, and progressive-attitudes-toward-education scores for males and females in Colombia	154
46.	Means, standard deviations, and <u>F</u> statistic for Benevolence scores, scores on the handicapped-persons scale, and progressive-attitudes-toward-education scores for male and female comparisons in Peru	156

47.	Multiple correlations of change orientation variables with attitude-toward-disabled-persons and toward education (progressive and traditional) in Colombia and Peru	158
48.	Partial correlations between attitudes-toward-handicapped-persons and attitudes toward education (both progressive and traditional) as related to change orientation variables for Colombia and Peru	159
49.	Zero-order correlations between attitude-toward-handicapped persons scale (content) and the Gordon scale of values for Colombia	162
50.	Zero-order correlation between attitude toward education (content) and Gordon scale of values for Colombia	163
51.	Zero-order correlations between attitude-toward-handicapped-persons scale (content) and the Gordon scale of values for Peru	165
52.	Zero-order correlations between attitudes toward education (content) and Gordon scale of values for Peru	166
53.	Means, standard deviations, and analysis of variance of attitude-toward-disabled-persons scores for the three occupational categories in Colombia	168
54.	Duncan's New Multiple Range Test applied to means of attitude-toward-disabled-persons scores for three occupational categories in Colombia	App. A
55.	Means, standard deviations, and analysis of variance of attitude-toward-disabled-persons scores for the four occupational categories in Peru	170
56.	Duncan's New Multiple Range Test applied to means of attitude-toward-disabled-persons scores for four occupational categories in Peru	App. A

57. Means, standard deviations, and analysis of variance of attitude-toward-disabled-persons scores for respondents working in the area of SER in Colombia, Peru, and Kansas	171
58. Duncan's New Multiple Range Test applied to means of attitude-toward-disabled persons scores for respondents working in the area of SER in Colombia, Peru, and Kansas	App. A
59. Means, standard deviations, mean rankings, and <u>F</u> statistic for Benevolence value scores according to the three occupational categories in Colombia . . .	173
60. Duncan's New Multiple Range Test applied to means of Benevolence scores for three occupational categories in Colombia	App. A
61. Means, standard deviations, and mean ranking for Recognition value scores according to three occupational categories in Colombia	173
62. Duncan's New Multiple Range Test applied to means of Recognition value for three occupational categories in Colombia	App. A
63. Means, standard deviations, mean rankings, and <u>F</u> statistic for Leadership value scores according to the three occupational categories in Colombia . . .	174
64. Means, standard deviations, mean ranking, and <u>F</u> statistic for Benevolence value scores according to the four occupational categories in Peru	176
65. Duncan's New Multiple Range Test applied to means of Benevolence value scores for the four occupational categories in Peru	App. A
66. Means, standard deviations, mean rankings, and <u>F</u> statistic for Recognition value scores according to the four occupational categories in Peru	177

67.	Means, standard deviations, mean rankings, and <u>F</u> statistic for Leadership value scores according to the four occupational categories in Peru	178
68.	Duncan's New Multiple Range Test applied to means of Leadership value scores for the four occupational groups in Peru	App. A
69.	Means, standard deviations, and <u>F</u> statistic of Benevolence value scores for respondents working in the area of SER in Colombia, Peru, and Kansas	180
70.	Duncan's New Multiple Range Test applied to means of Benevolence value scores for respondents in the area of SER in Colombia, Peru, and Kansas	App. A
71.	Means, standard deviations, mean rankings, and <u>F</u> statistic for Recognition value scores for respondents working in the area of SER in Colombia, Peru, and Kansas	180
72.	Duncan's New Multiple Range Test applied to means of Recognition value scores for respondents in the area of SER in Colombia, Peru, and Kansas	App. A
73.	Means, standard deviations, mean rankings, and <u>F</u> statistic for Leadership value scores for respondents working in the area of SER in Colombia, Peru, and Kansas	181
74.	Duncan's New Multiple Range Test applied to means of Leadership value scores for respondents in the area of SER in Colombia, Peru, and Kansas	App. A
75.	Analysis-of-variance of progressive-attitude-toward education scores for the three occupational categories in Colombia	183
76.	Analysis-of-variance of traditional-attitude-toward education scores for the three occupational categories in Colombia	184

77.	Means, standard deviations, mean rankings, and <u>F</u> statistic for progressive-attitudes-toward-education scores according to the four occupational categories in Peru	185
78.	Means, standard deviations, mean rankings, and <u>F</u> statistic for traditional-attitude-toward-education scores according to the four occupational groups in Peru	186
79.	Means, standard deviations, mean rankings, and <u>F</u> statistic for progressive-attitude-toward-education scores for respondents working in the area of SER in Colombia, Peru, and Kansas	187
80.	Means, standard deviations, mean rankings, and <u>F</u> statistic for traditional-attitude-toward-education scores for respondents working in the area of SER in Colombia, Peru, and Kansas	188
81.	Means, standard deviations, and <u>F</u> statistic related to four change variables for three occupational groups in Colombia	191
82.	Duncan's New Multiple Range Test applied to child rearing practices for three occupational groups in Colombia	App. A
83.	Duncan's New Multiple Range Test applied to the health practice variable for three occupational groups in Colombia	App. A
84.	Duncan's New Multiple Range Test applied to automation mean scores for three occupational groups in Colombia	App. A
85.	Means, standard deviations, and <u>F</u> statistic related to four change variables on four occupational groups in Peru	193
86.	Duncan's New Multiple Range Test applied to child rearing scores for four occupational groups in Peru	App. A

87.	Means, standard deviations, and <u>F</u> statistic related to contacts with mentally retarded and emotionally disturbed persons for four occupational groups in Colombia	195
88.	Duncan's New Multiple Range Test applied to amount of contact with mentally retarded persons for four occupational groups in Colombia	App. A
89.	Duncan's New Multiple Range Test applied to amount of contact with emotionally disturbed persons for four occupational groups in Colombia	App. A
90.	Means, standard deviations, and <u>F</u> statistic related to contacts with mentally retarded and emotionally disturbed persons for four occupational groups in Peru	196
91.	Duncan's New Multiple Range Test applied to amount of contact with mentally retarded persons for four occupational groups in Peru	App. A
92.	Duncan's New Multiple Range Test applied to amount of contact with emotionally disturbed persons for four occupational groups in Peru	App. A
93.	Comparison of mean differences, standard deviations and <u>F</u> statistic in respect to three value variables and three occupational categories in Colombia . . .	199
94.	Comparison of mean differences, standard deviations and <u>F</u> statistic in respect to three value variables and four occupational categories in Peru	200
95.	Comparison of mean differences, standard deviations and <u>F</u> statistic in respect to three value variables for respondents in the SER group in Colombia, Peru, and Kansas	201
96.	Duncan's New Multiple Range Test applied to means of respondents working in SER in Colombia, Peru, and Kansas for Support value scores	App. A

97.	Duncan's New Multiple Range Test applied to means of respondents working in SER in Colombia, Peru, and Kansas, for Conformity value scores	App. A
98.	Comparison of mean differences, standard deviations and <u>F</u> statistic in respect to six value variables in Colombia	203
99.	Comparison of mean differences, standard deviations and <u>F</u> statistics in respect to six value variables for males and females in Peru	204
100.	Comparison of mean differences, standard deviations and <u>F</u> statistics in respect to three attitude variables for males and females in Colombia	206
101.	Comparison of mean differences, standard deviations and <u>F</u> statistics in respect to three attitude variables for males and females in Peru	207
102.	Summary of hypotheses 3 thru 13 indicating confirmation or non-confirmation	223
103.	Means, standard deviations, and number of respondents for 68 variables by total, male, and female respondents for the SER occupational group in Colombia	App. A
104.	Means, standard deviations, and number of respondents for 68 variables by total, male, and female respondents for the E occupational group in Colombia	App. A
105.	Means, standard deviations, and number of male respondents for 68 variables for the L occupational group in Colombia	App. A
106.	Means, standard deviations, and number of respondents for 68 variables by total, male, and female respondents for the SER occupational group in Peru	App. A

Table	Page
107. Means, standard deviations, and number of respondents for 68 variables by total, male, and female respondents for the M occupational group in Peru .	App. A
108. Means, standard deviations, and number of respondents for 68 variables by total, male, and female respondents for the SER occupational group in Kansas	App. A

LIST OF FIGURES

Figure	Page
1. Basic facets used to determine component structure of attitude universe	243
2. Extension of facets used in Fig. 1 to determine component structure of attitude universe	244
3. Levels, component composition, and component labels for a six-component universe of intergroup attitudes	245
4. Hypothetical correlation matrix illustrating expected simplex ordering	246
5. A mapping sentence for the facet analysis of attitudes toward education	247
6. A mapping sentence for the facet analysis of attitudes toward education	248

LIST OF APPENDICES

A. Statistical Material

1. Duncan's New Multiple Range Test Tables
2. Means, Standard Deviations, and Number of Respondents for 68 Variables for the Total Sample, Males, and Females by Occupational Groups and Countries

B. Instrumentation

1. Attitudes Toward Education
2. Survey of Interpersonal Values
3. Personal Questionnaire
4. Attitudes Toward Handicapped Persons
5. Definitions of Physical Handicap
6. Personal Questionnaire: Handicapped Persons

C. Variables, Administration Procedures, Code Book, and Data Forms

1. Basic Variables of the Study
2. Administrators' Procedures
3. Code Book
4. Special Instructions for Colombia
5. Special Instructions for Peru
6. Special Instructions for Kansas
7. Data Transcription Sheet
8. FCC I and II Variable - Computer Print-Out
Code Form for Colombia, Peru, and Kansas (i.e. Friesen)
9. Religiosity

CHAPTER I

INTRODUCTION

Nature of the Problem

The accelerated rate of technological change has been well documented through the media of mass communication. Political, economic and psychological implications of these changes are demanding serious consideration of world leaders from many professions.

Familiar landmarks which once served as cultural reference points are rapidly disappearing. Culturally provided ways of validating personal identities, which were evolved over many generations and had the aura of the sacred, are being swept away in this tidal wave of change.

Those who nostalgically remember the "safe world that used to be" will not be given the choice of whether or not change should occur. The choice that confronts our generation is whether we are willing to direct change in socially responsible ways or whether this change will be achieved by cataclysm.

Berg has noted that obstacles to change, such as illiteracy, religious convictions, ancient social customs, economic needs etc., are chiefly attitudinal in nature and, as such, their removal becomes a task for the psychologist.

At present, we know something of attitudes and how to measure them. Now we must discover how to change them efficiently. We shall have to gain this knowledge rapidly and we shall have to work against difficulties inherent in our own culture which are raised against such studies. One difficulty, for example, will very likely be sharp criticism of proposals to "waste" good American dollars on research for changing attitudes in foreign lands--after all, attitudes are not important. Perhaps it will help to remind such critics that attitudes toward meat as food have caused many thousands of people in India to die of starvation rather than eat the Brahma cattle which were grazing in their grain fields. Critics or not, psychologists must accept the challenge of producing attitude change (Berg, 1965, p. 203).

The soaring rate of population growth also compounds the problems that the psychologist must face. Berg states that:

John D. Rockefeller, III, Chairman of the Board of the Population Council, has noted that to reach a world population of one billion, it took mankind the entire period of recorded history until the early nineteenth century. It took only another 100 years to add the second billion and but 30 more years to add the third billion. Only 15 years will be needed to reach four billion (Berg, 1965, p. 203).

The threat of automation is also being keenly felt in our expanding economy. In the past the chronically unemployed were usually the "socially voiceless ones" who docilely accepted their welfare payments. They, by and large, were not a threat

to the orderly functioning of our society. They usually did not verbalize and organize powerful protests to the politically and socially "significant others". Presently, the skilled and the semiskilled are finding that their skills, once the backbone of the occupational world, will soon be obsolete.

Berg observes that:

Many people will be surplus and, furthermore, they will know it. They will not be the silent, bowed men of toil but rather the trained persons who have up until now been mainstays in our society, who have skills to offer, but skills which society no longer needs. Eventually we shall find a solution, but the period of searching for an answer, the period we are just now entering, will be a time of increasing upheaval and social torment. It seems highly probable that we shall be faced with problems of delinquency and crime beside which our present problems in these areas will be dwarfed almost to invisibility. It also seems highly probable that the frequency of disorder such as alcoholism, depressions, neurotic reactions, etc., will vastly increase (Berg, 1965, p. 204).

In our culture we have tended to validate our identities through physical work. Here the impact of change will be keenly felt. For example, in the generation that preceded ours, a man of the soil validated his "maleness" by hand picking more corn than his neighbors. In a highly mechanized society this kind of validation is already meaningless. No longer will hard physical work as such ensure a meaningful identity.

Traditionally the disabled or handicapped person had limited opportunities to gain an identity based on vocational skills. In the United States serious efforts have been made to correct this deficiency through federal and state rehabilitation programs. However, it appears to this author that it will be necessary to carefully re-evaluate the rehabilitation programs for the physically, intellectually, and emotionally handicapped. We now endeavor to promote a positive self image by giving them skills through which they might become productive and self-sustaining individuals. While the intent of this effort is unquestionable admirable, the disabled, who already carries an extra burden, will increasingly discover that his "new found" work skills are not needed.

Hess asks the provocative question:

What is the future of the disabled individual in an automated economy. He has some grounds for hope when he observes that automation is reducing physical demands and eliminating safety hazards in jobs, thereby making jobs compatible with many more types of handicapping conditions. But, even though the physical and mental requirements of a job may now be within the tolerance of the handicapped individual, he is not necessarily assured of equal consideration in the sharp competition at the personnel office. Employers, as they ponder the choice between a large number of available candidates, need to insure against discrimination on the basis of the presence or absence of capacities unrelated to the requirements of the job (Hess, 1963, p. 156).

Certainly one of the challenges that confronts our generation is that of finding culturally relevant ways of helping the individual validate his identity. If this search is going to be successful, it will be necessary for this validation to be based on a model which emphasizes the intrinsic worth of man rather than on a model that emphasizes production per se.

Without question physical disability is a problem of increasing concern. Medical advances, and their dissemination throughout the world via Public Health agencies, have markedly reduced death rates (Davis, 1963). A major consequence is an increase in the number of children with physical disabilities who in previous years would have died in infancy (Meyerson, 1963, pp. 2, 3). In many underdeveloped countries, special education and rehabilitation programs are largely an innovation. Even as a concept or goal in many Latin American countries, special education and rehabilitation have yet to be adopted into the institutional complex. There are innovators, however, who recognize the current and expanding need for services for the disabled (Jordan, 1963, 1964a) and who welcome support in social change. In addition, there is a great need for broader communication about attitudes and programs among workers in special education and rehabilitation throughout Europe as well as Latin America (Second International Seminar on Special Education at Nyborg, Denmark, July, 1963).

Fundamental to both the program of social development in Latin America, and to the establishment of cooperative exchanges among professionals in the United States, Europe, and Latin America is the acquisition of normative data about attitudes of various interest groups toward special education and rehabilitation. This was considered the foremost need by the research group of the Second International Seminar on Special Education at Nyborg, Denmark, in July, 1963. Such data is indispensable to a coherent approach to international cooperation in a health-related field such as special education and rehabilitation. It involves the knowledge of what is permissible within a culture and of the groups who are most accepting and sympathetic toward such program developments. In the United States such data is necessary to understand the attitudes of sub-cultural groups, such as the "culturally deprived" and certain ethnic minorities, if adequate education-vocational programs are to be devised for them.

An important guideline for conducting this kind of research should involve a comprehensive cross-national research study aimed at uncovering similarities and differences in attitudes toward physical disability as well as attitudes toward the educational process. The problem of adequate methodology and technique must take into account unfamiliar cultures and social

systems as well as comparability from one cultural and/or linguistic setting to another. Such a study should also have an orienting theory, broad enough to be relevant to researchers, teachers, and other special education and rehabilitation personnel within the various countries involved. Theory should make possible the integration of findings into a more general conceptual framework. In short, theory should increase the power and scope of a study, providing an orienting purpose beyond the immediate practical objectives of the research (e.g., Goode and Hatt, 1952, pp. 9-16).

The theoretical problem to be studied in the present research will be restricted to the prediction of certain correlates of attitude. The main focus of study will be the relationship between certain variables having to do with interpersonal values, personal contact, and attitude, with the assumption that both value and contact variables serve as determinants of attitudes.

As for methodology, the principal problem to be investigated is that of developing an adequate solution to the problem of cross-national and/or cultural comparability of data.

The technical problem can be considered to have two aspects; first, that of developing reasonable question translations, of forming relationships with those interested and

willing to help with the research, making contacts for the administration of questionnaires, selecting samples, reproducing material, staying healthy, etc. Second, the problem of storing, organizing, and processing the data in ways which are general enough to be useful and comparable for a variety of cultural analyses.

Statement of the Problem

The purpose of this study is to investigate technical, methodological, and theoretical considerations relating to the cross-national investigation of attitudes toward education and physical disability. An attempt will be made to employ a set of instruments which will elicit these attitudes and will enable comparison of these attitudes from one cultural group to another. An attempt will also be made to relate these attitudes to other demographic variables which from a theoretical standpoint should serve either as correlates or predictors. A final objective is to develop a set of techniques to facilitate the collection, processing, and analysis of data in subsequent studies.¹

¹The broader research program is being developed by Dr. John E. Jordan and a number of his doctoral students in the College of Education at Michigan State University. Data will be collected in several nations in Latin America, Africa, Asia and Europe as well as in the United States.

Theory has suggested that values are important determinants of attitudes. In respect to physically disabled persons, it has been suggested that persons who generally value others as having intrinsic worth are likely to hold more favorable attitudes toward the disabled than are those who value others according to more absolute comparative standards. This kind of comparison can also be made on the favorable-unfavorable continuum as far as attitudes toward education are concerned. Part of the problem will be to determine whether this kind of a relationship does in fact exist in attitudes toward education.

Theory has also suggested that the amount and kind of interpersonal contact with a subgroup are determinants of attitudes. Another problem, then, is to determine the amounts and kinds of experiences that respondents have with educational institutions as well as disabled persons and how this data is related to attitude scores.

It will also be possible to gather various kinds of personal and demographic data in addition to the information specified by the main purposes of the study. Modern computer analysis techniques make it possible to exploit interrelationships among diverse data of this sort in ways which may provide subsequent researchers with suggestive relationships and provide clues for new research predictions.

Definition of Terms

The following terms need to be operationally defined as used in this study.

Attitude.--The sense in which this general term will be used follows the definition by Guttman (1950, p. 51). An attitude is a "delimited totality of behavior with respect to something. For example, the attitude of a person toward Negroes could be said to be the totality of acts that a person has performed with respect to Negroes." Use of this definition is consistent with the attempt to use some of Guttman's concepts in respect to scale and intensity analysis.

Attitude Component.--Components of attitudes have been discussed by various investigators (e.g., Katz, 1960, p. 168; Rosenberg, 1960, pp. 320, ff; Guttman, 1950, Ch. 9). The two components typically considered are those of belief and intensity, although Guttman defines additional components according to certain mathematical properties. In this study, the first component will be that of item content (or belief), the second that of item intensity (cf. Guttman, 1950, Ch. 9; Suchman, 1950, Ch. 7).

Attitude Content.--The attitude content component refers to the actual item statements within an attitude scale.

Attitude Intensity.--The attitude intensity component refers to the affective statements that a respondent makes regarding each content item; operationally, it consists of a separate statement for each attitude item on which the respondent may indicate how strongly he feels about the statement.

Attitude Scale.--As used in this study, a scale is a set of items which fall into a particular relationship in respect to the ordering of respondents. A set of items can be said to form a scale if each person's responses to each item can be reproduced from the knowledge of his total score on the test within reasonable limits of error (e.g., Guttman, 1950, Ch. 3; Stouffer, 1950, Ch. 1).

Demographic Variables.--Specifically, this refers in the present study to certain statistical data frequently used in sociological studies. These variables are age, sex, education, income, rental, occupation, number of siblings, occupational and residential mobility, and whether the respondent spent his youth in a rural or urban setting. Since the respondents were overwhelmingly Catholic and urban there was no attempt to analyze these dimensions. Data on these variables were secured through responses of respondents on questionnaire items.

Educational Progressivism.--A ten-item scale of progressive attitudes toward education developed by Kerlinger (1958).

Educational Traditionalism.--A ten-item scale of traditional attitudes toward education developed by Kerlinger (1958). These measures do not constitute scales as defined for the present study, but rather are constituted of items which appeared in factor analytic studies, and which were characterized by the terms which identify the scales.

Handicap.--This term signifies the social disadvantages placed upon a physically impaired person by virtue of the impairment. A handicap is a consequence of culturally held values and attitudes which serve to define the physically impaired person socially.

Impairment.--This term signifies a defect in tissue or in body structure. As such it has no particular functional connotations.

Institutional Satisfaction.--This term is used to describe a set of variables on which the respondents were asked to indicate how well they felt that various kinds of local institutions were doing their job in the community. These institutions were schools, business, labor, government, health services, and churches.

Interest Group.--Any group that, on the basis of one or more shared attitudes, makes certain claims upon other groups in the society to engage in particular forms of behavior.

Associational interest groups work as collectivities to exert influence (e.g., Almond, 1960).

Occupational Personalism.--This term is operationally defined by questionnaire items designed to ascertain: first, about what per cent of the time people work with others with whom they feel personally involved; second, how important it is to work with people with whom one is personally involved. A personalistic orientation to life is sometimes considered as a distinguishing characteristic of traditional social patterns (e.g., Loomis, 1960).

Physical Disability.--This is a functional term denoting some loss of the tool function of the body. An approximate synonym is physically "incapacitated," and the term "personal fisicamentos incapacitados" was used in the Spanish version to refer to disabled persons. In the English version of the scale the term "handicapped" was used since this appeared to be a more meaningful terminology. The technical distinction between handicap and disability is perhaps not a very meaningful or significant one to a lay person.

Rehabilitation.--A term signifying "restoration of the disabled to the fullest physical, mental, social, and vocational usefulness possible" (Jordan, 1964b).

Relational Diffusion.--This term is operationally defined by a questionnaire item designed to determine the extent to which personal relations on the job diffuse into a person's non-job social milieu. A personalistic diffusion between the social milieu and occupational milieu is sometimes considered as a distinguishing characteristic of traditional social patterns (e.g., Loomis, 1960).

Religiosity.--A term used to denote orientation to religion. Operationally, it is defined by three items: first, religious preference; second, the importance of religion; third, the extent to which the rules and regulations of the religion are followed.

Special Education.--Following Kirk (1962, p. 29) this term characterized educational practices "that are unique, uncommon, of unusual quality, and in particular are in addition to the organization and instructional procedures used with the majority of children." Jordan (1964b, p. 1) has commented: "the basic aim of special education is to prevent a disability from becoming a handicap."

Value.--Two value terms are used, but defined operationally by the same set of measures. Asset values predispose a person to evaluate others according to their own unique potentials and characteristics. Comparative values predispose a

person to evaluate others according to external criteria of success and achievement (Wright, 1960, pp. 128-133). Operationally these values are defined by three scales on the Survey of Interpersonal Values (Gordon, 1960). Asset values will be measured by the Benevolence Scale, Comparative Values by the Recognition and Leadership Scales. These three scales were judged by the investigator to have adequate face validity for the measurement of the values proposed by Wright. Additional value orientations measured by the Gordon Survey of Interpersonal Values are labeled Support, Conformity, and Independence.

Organization of the Thesis

This thesis is organized according to the following plan:

Chapter I serves as an introduction to the nature of the problem involved in this study.

Chapter II is a summarization of the theory and research related to this study. The major divisions include:

1. A theoretical framework for attitudes toward education.
2. Attitudes toward disability - a theoretical framework.
3. The relationship of values and personal contact to attitudes - some research findings.
4. Empirical research in attitudes toward the physically disabled.

Chapter III is concerned with the procedures and methodology of the study. A general description is given of the countries of Peru and Colombia as well as the research population. The instrumentation of the study and the statistical procedures used in the analysis of the data are included in this chapter.

Chapter IV presents the research results in tabular and explanatory form.

Chapter V presents a summary of the results with conclusions and recommendations.

CHAPTER II

REVIEW OF THEORY AND RELATED RESEARCH

A Theoretical Framework for Attitudes Toward Education

Volumes of current literature have been devoted to exploring the relationship of education to innovation and social change. However, there has been surprisingly little theoretical discussion about the basic dimensions or factors underlying attitudes toward education.

Miles makes the following observation:

A very wide variety of strategies for creating and controlling educational change is being employed.... The dominant focus in most contemporary change efforts, however, tends to be on the content of the desired change, rather than on the features and consequences of change processes.... We need to know, for example, why a particular innovation spreads rapidly or slowly, what the causes of resistances to change are in educational systems, and why particular strategies of change chosen by innovators succeed or fail (Miles, 1964, p. 2).

Kerlinger has developed a theoretical model built on an education dichotomy which includes progressive and traditional dimensions of attitudes toward education. His approach will be used in this study.

Educational attitudes can be conceptualized as hinging on two relatively independent underlying factors or ideologies. Traditionalism apparently is not just the opposite of progressivism in education. The opposite of progressivism is anti-progressivism. Traditionalism seems to have an existence of its own. Rather than the usual way of conceiving of traditionalism as simply the negation of progressivism, it might better be conceived as the affirmation of a stand which emphasizes a conservative-traditional approach to educational issues and problems. Progressivism also seems to be a stand in its own right. When we say a man is an "educational progressivist" we do not simply mean that he is an anti-traditionalist. While this is undoubtedly true, it is more important to suggest that progressivism is an independent stand in its own right (Kerlinger, 1958, p. 330).

Kerlinger defines the restrictive-traditional factor as that which emphasizes subject matter for its own sake. The hierarchical nature of impersonal superior-inferior relationships is considered important and there is an emphasis on external discipline. Social beliefs are preserved through the maintenance of the status quo.

In contrast, the permissive-progressive factor emphasizes problem solving and de-emphasizes subject matter per se. From

this perspective, education is seen as growth and the child's interest and needs are seen as basic to education. Equality and warmth in interpersonal relationships is valued. There is an orientation on internal rather than external discipline. Social beliefs tend to be liberal and emphasize education as an instrument of change (Kerlinger, 1958, p. 112).

Kerlinger's theory can be summarized in the following four propositions:

1. Individuals having the same or similar occupational or professional roles will hold similar attitudes toward a cognitive object which is significantly related to the occupational or professional role. Individuals having dissimilar roles will hold dissimilar attitudes.
2. There exists a basic dichotomy in the educational values and attitudes of people, corresponding generally to "restrictive" and "permissive", or "traditional" and "progressive" modes of looking at education.
3. Individuals will differ in degree or strength of dichotomization, the degree or strength of dichotomization being a function of occupational role, extent of knowledge of the cognitive object (educa-

tion), the importance of the cognitive object to the subjects, and their experience with it.

4. The basic dichotomy will pervade all areas of education, but individuals will tend to attach differential weights to different areas, specifically to the areas of (a) teaching-subject matter-curriculum, (b) interpersonal relations, (c) normative, and (d) authority-discipline (Kerlinger, 1956, p. 290).

Kerlinger has noted that the value structure of individuals is not well understood. He insists that the problem of the consistency and inconsistency of an individual's attitude is still largely unsolved (Kerlinger, 1956, p. 296).

As a result of the implications of these observations, Kerlinger designed a study which examined the educational attitudes of professors and laymen. The sample consisted of 25 subjects chosen on the basis of occupational roles as well as known attitudes toward education.

He developed the following categories for the study:

ATTITUDES:

- (1) Restrictive-traditional
(dependence-heteronomy)
- (2) Permissive-progressive
(independence-autonomy)

AREAS:

- (a) Teaching-Subject Matter Curriculum
- (b) Interpersonal Relations

- (k) Normative-Social (conventionalism-nonconventionalism)
- (m) Authority-Discipline

An example of 1(a) would be: The true view of education is so arranging learning that the child gradually builds up a storehouse of knowledge that he can use in the future. An illustration of 2(a) would be exemplified in the following statement: Knowledge and subject matter themselves are not so important as learning to solve problems. An illustration of 1(m) might be: One of the big difficulties with modern schools is that discipline is often sacrificed to the interest of the children. An example of 2(m) might be: True discipline springs from interests, motivation, and involvement in live problems.

Kerlinger warns that the restrictive and permissive dimensions are rarely opposites nor merely positive and negative assertions of the same thing. Each category is presumably independent (Kerlinger, 1956, p. 296).

The results of the Kerlinger study indicated that occupational roles and role expectations are potent independent variables influencing attitudes and visa versa. Individuals having similar roles might be expected to have similar attitudes and a similar attitude structure.

Kerlinger summarizes the traditional-progressive issue as follows:

A basic dichotomy seems to exist in educational attitudes corresponding generally to restrictive and permissive, or traditional and progressive ways of regarding education, and some individuals show the dichotomy more sharply than others depending on their occupational roles, their knowledge of and experiences with education, and the importance of education to them (Kerlinger, 1956, p. 312).

Smith, a student of Kerlinger, designed a study in which she hypothesized that progressivism and traditionalism were basic dimensions of educational attitudes that would emerge and remain factorially invariant under different conditions of item sampling and subject sampling.

She also hypothesized a relationship between attitudes toward education and general social attitudes. Thus individuals holding progressive educational attitudes would tend to be liberal in their social attitudes and visa versa. Individuals conservative in their social attitudes would be expected to be traditional in their educational attitudes.

In two Q sorts consisting of a total of 140 attitude statements relating to all aspects of education, she found that progressive and traditional factors of the Q sort did indeed remain invariant. Other factors which emerged from one of the sorts were labeled as "moral values" and "interpersonal relations".

On the third Q sort, she found that liberalism and conservatism did emerge as basic dimensions of social attitudes and were highly related to educational attitudes in the direction of

the hypothesis. Two other factors which emerged from the third Q sort were labeled as "internationalism" and "Religious Tenents" (Smith, 1963).

Block and Yaker (1965) developed a scale to measure intellectual attitudes: the Intellectualism-Pragmatism (I-P) Scale. While they do not define intellectualism in this article, it is contextually inferred that it is an intellectual orientation resulting from academic exposure.

They note that intellectualism was found to be associated with a progressive attitude toward education as measured by the Kerlinger Education Scale. Contrary to expectations, however, I-P scores were not related to Kerlinger's Traditionalism Scale.

The Intellectualism scores were also positively correlated with scores on the Attitudes Toward Disabled Persons Scale (developed by Yaker, et al., 1960). The students who changed most in their attitudes toward disabled persons, as measured by the Attitudes Toward Disabled Persons Scale, were the ones who scored highest on the Intellectualism scale.

They concluded that education (at least some types of education) brings about attitude changes in students that are related to a greater intellectual orientation.

Kramer used Rokeach's Dogmatism Scale and Kerlinger's Education Q Sorts in an effort to measure the interrelation of belief systems and educational values of school teachers.

He found that "open-minded" teachers as a group were more consistent and held permissive-progressive attitudes. He also found that the more "open-minded" a teacher's belief system was, the greater the likelihood for internal consistency of an educational attitude structure in a progressive direction.

While the "close-minded" teachers were less consistent than the "open-minded" teachers, they were more consistent than those who had no clear cut belief system (Kramer, 1963).

Thoreson concluded that when an individual is faced with conflicting norms held by multiple reference groups, it is the strength of his association with a group that determines whether that group's norms will be internalized by him (Thoreson, 1963).

Lawrence (1963) used the Scale of Beliefs on Social Issues to measure liberal beliefs and consistency of beliefs. This scale appeared to differentiate between liberal and conservative beliefs. Lawrence also used Kerlinger's Education Scale II to measure both progressive education attitudes and attitudinal consistency. She reported that this scale did not seem to differentiate progressive and traditional attitudes toward education.

Taylor (1963) used Kerlinger's Education Scale II to study the relationship between basic education attitudes and participation in professional teacher activities. She was also interested in the relationship of basic educational attitudes to educa-

tional background of teachers. She found that teachers with border-line traditional attitudes participated less in activities related to pupils than did teachers in other categories (such as traditional, progressive border-line, progressive). She also found that 29% of the teachers had attitude scores that almost certainly indicated either traditionalism or progressivism.

Anderson (1964) studied the changes in attitudes of prospective teachers toward education and teaching in secondary schools. She found that student teachers, for the most part, did not change attitudes toward education and teaching. She concluded that the extent and direction of change seems to depend on the degree to which the students perceive existing school and community objectives, policies, and relationships.

Several factors responsible for producing attitude change were identified. These included people with whom student teachers came in contact, effectiveness of the school program, and attitudes formulated before student teaching experiences (Anderson, 1964).

Hand (1964) studied teacher characteristics associated with changed attitudes and performance in the teaching of reading. She found that a tendency toward more progressive beliefs was a factor associated with change in teacher's attitudes.

Purcell (1964) found teaching methods, as well as content, are important in trying to change attitudes of perspective teachers.

Classon, in her study of elementary school teachers attitudes toward children and teaching as well as toward supervision, concluded that the success of the program supervisor who attempts to introduce or improve a program will depend, in a large measure, upon the degree of acceptance and co-operation from the staff. The supervisor should carefully study and evaluate teachers attitudes toward supervision before attempting to improve and develop any program (Classon, 1963).

Attitudes Toward Disability - A Theoretical Framework

Various investigators in the field of special education and rehabilitation have noted the inadequacy of much of the "practical oriented" special education research and have urged that greater efforts be made to design studies with theoretical relevance and consequently greater generality (Block, 1955; Kvaraceus, 1958; Levine, 1963; and Meyerson, 1955, 1965). Felty¹ noted, however, that some research in physical disability has been theoretically derived, and that other research studies can be shown to have theoretical relevance even though an explicit theory is lacking.

¹Felty's (1965) pilot study in Costa Rica has provided invaluable insights to the development of the present study.

He further noted that an analysis of these studies should suggest ways in which the outcomes can be related to broader social, social-psychological or psychological theory. This in turn should lead to the formulating of new hypotheses which can be empirically tested (Felty, 1965).

The theoretical framework of the present study, which has a social-psychological orientation, is generally consistent with the framework of Wright (1961), and Meyerson (1955, 1963) in the field of physical disability. Concepts central to this orientation are those of self, other, reference groups, role, attitude and value. All are presumed to be related to interpersonal interaction although only the concepts of attitude and value will be explored fully in the present study. Although there are differences between the theoretical orientation of Meyerson (1963) on one hand and the Meadian orientation of Shibutani (1961) on the other, both share the basic interactional propositions. The underlying assumptions, according to Shibutani (1961, p. 22-24) are as follows: (a) behavior is motivated through the give and take of interpersonal adjustment - both the person and society are products of communication, (b) personality is continually reorganized and constructed in the day-by-day interactions with others, (c) culture consists of models of proper conduct hammered out and reinforced by communications

and by collective grappling with life conditions. The attitudinal implications of interpersonal contact, value organization, social norms and role behavior as perceived by people will be considered in the present study.

The relationship of this frame of reference to physical disability was proposed by Levine. He suggested that disability is not a thing in itself but a social value judgment.

These values related to society's perception of leadership, contributions toward improving society, being a good citizen, being a family head and other essential aspects for maintaining a society. These values are criteria against which behavior is assessed in terms of deviation. All members of society, whether handicapped or not, are evaluated primarily by these values. Where an individual cannot meet these demands, or where there are questions as to the adequacy of the individual in relation to these demands, there will be some devaluation of him on societies' part (Levine, 1961, p. 84).

Expressed in more general terms, Levine has suggested a relationship between social role, role perception, role value, and attitude. "Being a family head" and "being a good citizen" are two of many roles which are generally felt to be of value in maintaining society.

Role fulfillment may be perceived by others as fulfillment of an obligation to society, and people are evaluated by the way they are perceived as meeting these role obligations. Levine has further suggested that groups are stereo-typed

according to their social contributions (Levine, 1961, p. 84). From this perspective, persons with some defining characteristic such as blindness, crippling condition, color, etc., are categorized according to how others perceive them to maintain certain valued social roles.

The Relationship of Values and Personal Contact to Attitudes - Some Research Findings

The Value Question

According to Allport (1958), values are important sources of prejudice, or negative stereotypes. "The most important categories a man has are his own personal set of values. He lives by and for his values...evidence and reason are ordinarily found to conform to them...the very act of affirming our way of life often leads us to the brink of prejudice" (p. 24). "Man has a propensity to prejudice. This propensity lies in his normal and natural tendency to form generalizations, concepts, categories, whose content represents an oversimplification of his world of experience" (p. 26). "One type of categorization that predisposes us to make unwarranted prejudgments is our personal values" (p. 27).

Katz speaks of attitudes as having a "value-expressive function" (Katz, 1960, p. 173). They confirm and clarify to

others and to the person himself those things most important and central to his image. Katz discusses the relationship of attitude to value in terms of attitude change. "People are much less likely to find their values uncongenial than they are to find some of their attitudes inappropriate to their values" (p. 189). He would expect a great deal of consistency between a basic value, such as equality, and a more specific attitude, such as favorableness toward opportunities for disabled persons. People are generally more inclined to change or give up attitudes inconsistent or unrelated to central values.

Rosenburg (1960, 1956) has demonstrated an instrumental relationship between attitude and value. Stable positive attitudes are perceived as instrumental to positive value attainment and the blocking of negative values, whereas stable negative attitudes were perceived as instrumental to negative value attainment and the blocking of positive values. "The individual tends to relate positive attitude objects to goal attainment and negative attitude objects to frustration of his goal orientation" (Rosenburg, 1960 p. 321). Moderate attitudes (as compared to intense ones) were related to less important values, or in the case of important values the perceived instrumentality of the attitude to value attainment was unclear to the subject.

Rosenberg broadened the concept of attitudes to include both the positive-negative affective and the belief component.

Typically, attitudes have been concerned with the former, and beliefs considered separately. Allport (1958, p. 12-13) in considering prejudice, states "There must be an attitude of favor or disfavor; and it must be related to an overgeneralized (and therefore erroneous) belief." Osgood (1957, p. 190) has restricted attitude to mean "the evaluative dimension of the total semantic space."

In addition to his own research, Rosenberg's position has been strengthened by the findings of Cartwright (1949), Smith (1949) and Woodruff and DiVesta (1948). Guttman (1950) has also preferred a broad concept of attitude, though primarily on logical rather than experimental considerations.

A study by Carlson (1956) involved changes in prejudicial attitudes (affective and belief) toward Negro mobility. Attitudes became more favorable toward Negro movement into white neighborhoods as subjects' beliefs were changed from the view that Negroes tend to lower property values. The change was interpreted to be an inconsistency between the cognitive (belief) component and the affective value component.

Rosenberg (1960, p. 325-330) also studied hypnosis and post-hypnotic suggestion in respect to changing either belief or affective components. While his conclusions were concerned primarily with attitude structure and change, they also support

the previously discussed research suggesting that the instrumentality of a belief to valued goal is associated with a corresponding and direction related affective component.

Value Variation Among Groups

Values may vary among groups and societies. That is, groups and societies may vary in type of role behavior perceived to be most important. Classical sociological and typological formulations of societies, typically oriented toward social structure, are often stated in terms of value orientations as well as in terms of structural effects. These are well summarized by Loomis (1960) and Becker (1950). For our purposes three types of societies may be considered: the traditional, the transitional, and the modern. These terms represent points or sections along a continuum of modernization. Thus persons in a modern society are characterized as holding values that are most affectively neutral, achievement oriented, change oriented, more materialistic and instrumental, more universalistic, etc., than those in a traditional society. With this scheme in mind, Latin American society can be described typically as traditional or transitional, and the United States as a modern society (e.g., Williams, 1951; Parsons and White, 1961; Loomis, 1961; and Almond and Coleman, 1960).

Previous considerations of disability would lead to the inference that value variations are associated with variations in attitudes toward particular disability groups. It would also seem reasonable to posit that those with a particular value orientation would evaluate disability groups differently depending upon the perception of the relative ability of the disability groups to meet valued role requirements.

Edmonson studied the institutional values of the Latin culture. He makes this observation:

Traditionalism as a cultural value requires a strong identification with parents and willingness to submit to the dictates of ones "elders and betters". A radically progressive orientation would then fit with a stormy adolescence and inter-generational disruption which seem to be outstanding features of American life (Edmonson, 1957, p. 66-67).

The following observation by the same author has serious implications for educational attitudes in Latin America. "In economic affairs, Anglo culture maximized the motivational value of ambition and sets the goal at success; Hispano culture might be said to emphasize the motivations of duty and loyalty and is willing to discount and live with failure" (Edmonson, 1957, p. 60).

Value Variations of Rehabilitation Groups in Latin America

Jordan (1963, 1964) has suggested that in Latin America, those persons in the area of Special Education and Rehabilita-

tion differ in values from the majority. In discussing these differences, he has drawn on the work of Almond and Coleman (1960) in the characterization of various types of groups and associations in society, and also on the work of Rogers (1962) and Katz et al. (1963) in the characteristics and process of innovation diffusion. Rogers as well as Almond and Coleman have drawn on the sociological typologies referred to in the previous section. No attempt will be made here to summarize this vast literature. However, Jordan (1963), has hypothesized that Rehabilitation and Special Education Groups in Latin America are characterized by relatively modern, democratic values (p. 22) of "democracy, constitutionalism, humanism, the scientific process and universal suffrage" (p. 17) and more generally by "specificity, universalism, achievement, and affective neutrality" (p. 16).

It seems likely that a complex variety and interaction of goals and values are involved when it comes to the characterization of individuals working with Special Education and Rehabilitation groups. It has been suggested that values can be clustered according to whether they are derived from (a) comparisons or from (b) intrinsic assets (Dembo, Leviton, Wright, 1956).

If the evaluation is based on comparison with a standard, the person is said to be invoking comparative values.... On the other hand, if evaluation arises from the qualities inherent in the object of judgment itself, the person is said to be invoking asset values. What matters is the object of judgment in a setting that has its own intrinsic purposes and demands. The person's reaction is then based upon how appropriately the situational demands are fulfilled rather than on comparison with a predetermined standard (Wright, 1960, p. 29).

Some situations require comparative evaluations, such as the requirements for a particular type of job. In other situations, however, the asset minded person may be able to evaluate the disabled person for his own unique characteristics as a human being. Wright is aware that this analysis may arouse skepticism. "But incredulity shades into understanding when one considers that walking itself is always a remarkable achievement" (Wright, 1960, p. 29).

Apart from the economic argument that in the long run education and training are cheaper than public support, one might argue that the whole concept of special education and rehabilitation is a response to the asset values of a society. The direct antithesis of this position can be exemplified in a society where educational opportunity is based on some comparative standard, either in respect to hereditary standards (comparison with the past) or to achievement standards (comparison with present norms). A reasonable inference from the asset-

comparative value framework is that persons working in the field of special education and rehabilitation would be expected to hold higher asset values than those working in other occupations, regardless of where the social system was located on the modern-traditional continuum.

Attitude Intensity

Rosenburg has considered the intensity component of an attitude as an action predictor (1960, p. 336). Carlson (1956, p. 259) found initial intense attitudes much more resistant to change than moderately held attitudes. Guttman and Foa (1951) have shown that intensity is related to amount of social contact with the attitude object. Considerable research has suggested that intensity is an important component of attitude structure in determining the "zero point" of a scale that discriminates the psychologically "true" positive from negative attitude direction. This is not the same as the actual scale numbers. The printed zero point on a scale may or may not be the actual point of indifference (Guttman, 1947, 1950, 1954; Guttman and Foa, 1951; Guttman and Suchman, 1947; Suchman and Guttman, 1947; Suchman, 1950; Foa, 1950; and Edwards, 1957).

Considering the question of relationship between attitude and action, Rosenburg states "what is usually done is to follow

a theoretical role of thumb to the effect that the "stronger" the attitude, the more likely it will be that the subject will take consistent action toward the attitude object...the more extreme the attitude, the stronger must be the action-eliciting situation in which those forces are operative...improvement in the validity of estimates of attitude intensity will increase the likelihood of successful prediction" (Rosenburg, 1960, p. 336).

In addition to the important function of increasing predictability, attitude intensity locates the true zero-point of a scale in which the area of content has been found to be scalable (e.g. Guttman, 1947). Locating a true zero-point appears to have the highly desirable characteristic of elimination of question bias (Poa, 1950; Suchman and Guttman, 1947; and Guttman, 1954b), which often confuses cross-lingual studies. The location of a true zero-point on a scale makes it possible to compare responses between different language groups (Guttman, 1954a).

Personal Contact

Homans (1950, p. 112) has suggested that frequency of contact between groups or persons and favorableness of attitude are related. He held the converse also to be true.

Allport (1958, p. 250-268) examines various kinds of inter-group contact. He concludes that "equal status contact"

creates more favorable attitudes when the contact is in pursuit of common goals (p. 267). Casual contact is unpredictable in effects, but may serve to reinforce adverse stereotypes (p. 252). Status was also found to be significant. In attitude studies toward Negroes, those having contact with high status or high occupational group Negroes held more favorable attitudes than those having contact with lower status Negroes (p. 254, 261-2).

Jacobson, et al. (1960, p. 210-213) considered research related to inter-group contact, particularly between cultures. He suggested that equal status contacts are more likely to develop friction if the basis of the status equality is unsure; i.e., if one group does not fully accept the equality of the others.

Zetterberg (1963, p. 13) has reviewed social contact considerations of Malawski in which the effects of frequency of social contact on liking or disliking are dependent on two other variables: "Cost of avoiding interaction, and availability of alternative rewards...if the costs of avoiding interaction are low, and if there are available alternative sources of reward, the more frequent the interaction, the greater the mutual liking". Phenomenologically, these observations seem related to the felt freedom of a person to interact with another and his choice of this interaction over other activities perceived as rewarding.

The foregoing might be summarized in the following manner. Frequent contact with a person or group is likely to lead to more favorable attitudes if:

1. the contact is between status equals in pursuit of common goals (Allport, 1958, p. 267);
2. the contact is perceived as instrumental to the realization of a desired goal value (Rosenburg, 1960, p. 521);
3. contact is with members of a higher status group (Allport, 1958, p. 254, 261-262);
4. the contact is among status equals and the basis of status is unquestioned (Jacobson, et al. 1960, p. 210-213);
5. the contact is volitional (Zetterberg, 1963, p. 13); and
6. the contact is selected over other rewards (Zetterberg, 1963, p. 13).

Empirical Research on Attitudes Toward the Physically Disabled

Apparently there have been no studies that deal directly with the problem of cross-national attitudes in relation to disabled persons. However, a number of studies have considered attitudes toward specific kinds of physical impairment in specific settings in the United States. These have been reviewed

by Baker, et al. (1953), Wright (1960), Cruickshank (1955, 1963) and others. Some of these studies relevant to the present study will be discussed.

General Studies

Barker, et al. (1953) attempted an analysis of attitudes expressed in religion, fiction and humor (p. 74-76). Religious and literacy analyses revealed considerable variation in attitude. They also found a strong tendency for jokes about physical disability to be depreciating. They suggested jokes about this group had far more negative effect than jokes about other groups such as farmers and salesmen. In another study, Barker and Wright (1955) found that some people mask their unfavorable attitudes toward disability. Jokes might provide a disguised outlet for these unfavorable feelings.

Social Contact and Information Studies

Roemer (1959) found that both social contact and increased factual information lead to increased acceptance and tolerance of disabled persons.

Haring, et al. (1958) found that workshop attempts to modify teacher attitudes (both verbal and behavioral) toward disabled children were more effective where teachers had regular

contact. This suggests a possible interaction between information and contact in relation to attitudes toward a subordinate group, provided the information requires a change in beliefs. "From the reaction of those teachers who had few opportunities for actual experiences with exceptional children, it appears that the threat of having to modify behavior is more anxiety-producing than the real process of change itself" (Haring, 1958, p. 130). "The effort of a formal attempt to modify attitudes, whether through mass media or a workshop, seems only to increase the anxiety and to provide a specific focus for the expression of rejection and the development of organized resistance. When specific experiences are provided, the actual problems that arise can be dealt with directly" (Haring, 1958, p. 131).

Cross Cultural Studies

Wright (1960, p. 253-256) sampled material drawn together by Maisel in an extensive survey of anthropological records. These records revealed wide discrepancies in the treatment of disabled persons, although "there is no doubt that negative attitudes would show a preponderance" (p. 255).

The present author spent a number of months among the Trio and Wayana Amer-Indians in Surinam, South America. He observed that, by and large, the disabled did not survive for

any length of time. One notable exception was a polio victim who was a paraplegic. He became an influential chief.

Hanks and Hanks (1958) attempted a more systematic analysis in an attempt to determine relationships between structural and functional characteristics of several non-occidental societies. They concluded that the physically disabled are better protected and have more participation in societies where: (a) the level of productivity is higher in proportion to the population and its distribution more nearly equal, (b) competitive factors in individual or group achievement are minimized, (c) the criteria of achievement are less formally absolute as in hierarchical social structures and more weighed with "concern for individual capacity, as in democratic social structures" (Hanks and Hanks, 1958, p. 19-20).

While not specifically related to disability, the Tanaka and Osgood (1965) study is methodically relevant. They studied the cross-culture, cross-concept, and cross-subject generality of affective meaning systems in groups having a different linguistic and cultural base - Americans, Finns and Japanese. The experimental group was assumed to be representative of each of the three cultures.

They found high consistency across the subjects' meaning systems although consistency was even higher within each subject-culture group.

Felty's study (1965) of attitudes toward physical disability in Costa Rica served as the pilot study for a number of cross cultural investigations currently underway at Michigan State University under the direction of Dr. John E. Jordan. The present study is included in that number. The occupational interest group as well as the hypothesis of both studies are essentially the same.

Using the Multiple Scalogram technique developed by Lingoes, Felty found that seven out of the twenty item "attitudes toward disabled persons" minimally met the Guttman scale requirements. He also found that six of the ten "progressive attitudes toward education" items formed a scale, and that no suitable scales were formed from the "traditional attitudes toward education" items.

When the intensity scores were plotted against content scores for these scales, the predicted U or J shaped curves were obtained. He noted however that not enough content total score categories were obtained around the "bending points" of the curve to define with precision where the scales should be divided into favorable and unfavorable sections.

The hypothesis that "leadership" value would be negatively related to "Attitudes Toward Disabled Persons" scores was considered confirmed. A significant negative correlation was

obtained. It was also predicted that the rehabilitation and special education group would have higher "Attitudes Toward Disabled Persons" scores than the other occupational groups. This proved to be the case as far as the executive group and the labor group were concerned. The education group, however, scored higher on this scale than did the rehabilitation and special education group.

Felty hypothesized that persons who score high in need for power and control over others will tend to score low in acceptance of disabled persons. He reported that his study appeared to confirm the negative relationship between comparative values and acceptance of the disabled, however the positive relationship between asset values and acceptance of the disabled did not seem to be supported.

On the attitude variables, Felty found significant differences between males and females. For example, males tended to be more traditional in their orientation toward education and place more emphasis on basic subject matter and on discipline than did their female counterparts. Conversely, females were more inclined to accept progressive, child-centered ideas. He cautioned that the fact that education as a group were also high in progressivism and low in traditionalism leaves a question as to whether this is primarily an occupational characteristic or a genuine sex difference.

He felt that the most significant finding concerning the lower income group (laborers) was the coupling of a predominately low income and low education level with high independence value. He acknowledged that this group consisted largely of a male population which may have biased the results in a Latin country. He noted that while this group was the most divergent group of the sample, it was perhaps the most typical of the Costan Rican population as a whole.

Further Cultural Studies

Richardson investigated uniformity and cultural variability of preference ranking of pictures of kinds of physical deviation. All samples were from the United States but included disabled and non-disabled subject as well as various ethnic and social class groupings. They found "remarkable uniformity in the hierarchy of preferences which the children exhibited for pictures children with and without various visible physical handicaps" (Richardson, et al. (1961, p. 246). Slight sex variations were found. Girls tended to depreciate children with more "social" impairments while boys seemed more concerned about "functional" impairments.

Goodman hypothesized this value pattern was related to the contact. These patterns were communicated from parents to adults without explicit rules or awareness variable with the

disabled. To test this hypothesis, groups were studied who were judged to come from subcultures with different value organizations in relation to visible impairments. These groups included children and adults from Jewish and Italian origins.

Results showed that (a) adults showed the same preference pattern as the dominant children's pattern, (b) the Jewish children did give higher ranking to both facially disfigured and obese than others, (c) both retarded and disturbed children gave deviant patterns. The evidence suggests that cultural values in respect to disability are related to cultural uniformity. People who deviate from the cultural norm in terms of value orientation might be expected to deviate also in appraisal of physically disabled.

Types of Disability - Further Studies

Studies by Kvaraceus (1956), Force (1956), Dickstein and Dripps (1958), Haring, et al. (1958), and Murphy (1960) consider preferences for different disability groupings in various specific situations. Kvaraceus, Dickstein and Dripps and Murphy, all studied preference for teaching particular groups over others by means of group rankings. In general, the gifted were most preferred while mentally handicapped and maladjusted children were least preferred. Physically disabled children were in between.

The studies of Force and Haring, et al. both suggested that children with cerebral palsy are considered most difficult to interact with. In Haring, et al. (1958, p. 38) respondents were considering acceptability of children for regular school programs. Only those children with mild hearing disorder and with leg crippling, if ambulatory by crutch or wheelchair, were considered educationally acceptable (p. 40-41), although others were functionally capable of the placement.

A study of Whiteman and Luckoff (1962) were concerned partially with attitude structure and personal value orientations. Because of the theoretical foundation of the research, it has relevance to the area of attitudes toward physical disability.

In respect to structure, which the authors apparently define as a pattern organization of beliefs and evaluations, they found that correlations are higher between disability groups on a given component.

The relationship between components, even though within a given disability, is poor. Thus the correlation between items dealing with the evalua-

tion of a physical handicap and the evaluation of physically handicapped people is .13 while the two items referring to blindness and blind people correlate .22. However, the relationship within components is appreciable better even though the responses are to different disabilities. Thus the two items referring to blindness and physical handicap and their effect on most worthwhile experiences correlate .53 while the two items referring to the sorrowful characteristics of blind and physically handicapped people correlate .61. Similar considerations obtain when the components deal with pity towards blind people, or with readiness for interaction with them (Whiteman, et al. 1962, p. 154-155).

The Measurement of Attitudes

General Considerations

Attitude has been previously defined as a "delimited totality of behavior with respect to something" (Guttman, 1950, p. 51). Responses on an attitude scale are one form of delimited behavior, but the attitude universe may consist of many forms of behavior which are more or less intercorrelated and which form separate subuniverses. An adequate attitude abstraction from this universe should include sampling from each of the possible sub-universes, a task of doubtful empirical possibility. A statement of the conceptual problem, however, points up limitations in the range of inferences one may make from a limited sampling of behavior. There will probably be a relationship between the statements one makes about a person with a disability, and

how one behaves overtly toward that person, but the relationship cannot be assumed without empirical support.

Green (1954, pp. 335-336) makes three other salient points about attitudes, their underlying characteristics, and their relationship to other variables. First, there must be a consistency of responses in respect to some social object. Second, the attitude itself is an abstraction from a set of consistent, or covarying responses. "In each measurement method, covariation among responses is related to the variation of an underlying variable. The latent attitude is defined by the correlations among responses" (p. 336). Responses themselves are not attitudes; rather, the attitude is defined by the latent variable. The detection of this latent variable requires certain scale properties. Finally, an attitude differs from other psychological variables (with the exception of value) because it is always in terms of a referent class of social objects. The approach to attitude assessment known as scalogram analysis (Guttman, 1950, Ch. 3) is consistent with the above considerations, and it is this approach which has been used in respect to the attitude variables employed in this study.

Cross-National Research and Scale Analysis

Various authors have considered the hazards of meaning equivalence in cross-national studies (Jacobson and Schachter, 1954; Jacobson, et al. 1960; Klineberg, 1950; Suchman, 1958, 1962, 1964; UNESCO, 1955, 1963). A primary problem in studies of this type is how to obtain comparable input stimuli, an aspect which may be sub-divided into problems of translation, and into the availability of equivalent language terms and concepts (Jacobson, et al. 1960, pp. 218-263). In respect to problems of input equivalents, Suchman (1958, p. 197), in reporting methodological findings of the Cornell Cross-Cultural Methodology Project, has distinguished between "concept" equivalence and "index" equivalence. He reported that it was not possible to compare specific questions and indices across cultures, because:

Technical problems such as language translation along with more subtle factors of the meaning of words, combined to make it extremely difficult to compare responses from different cultures with any degree of confidence that they were indeed equivalent. On the other hand, it was found that while specific indices might not be comparable, broader concepts were.

He suggested that scale analysis offered a "particularly promising method" of determining concept equivalence.

The problem of input equivalence of concepts in cross-national studies would appear to be an aspect of the general problem of question bias. Suchman (1950, Ch. 8) has explored the use of the measurement of the intensity of feeling with which people hold to their attitudes or opinions as a way of surmounting differences in attitude or opinion measurement results due mainly to nuances of differences in question wording ("bias"). Guttman (1954, p. 396), in referring to the application of this approach to the problem of bias by the Israel Institute of Applied Research, has commented: "in Israel where we sometimes have to do the same study in twelve different languages, it is essential to have a technique which does not depend on question wording."

Scale Analysis

The following brief summary of scale analysis is not intended to be exhaustive, but merely to present a rationale and an outline of the approach used in the study. A basic reference to this material is the writing of Guttman (1950). Comprehensive discussions of the technique in respect to other scaling methods are to be found in Green (1954), Edwards (1957), and Goode and Hatt (1952). Riley, et al. (1954) presents certain information in respect to technique not available elsewhere,

and Riley (1963) and Waisanen (1960) presented simplified techniques for introductory work with the method.

Scale analysis provides a method for determining whether a set of items can be ordered along a single dimension. If a particular attitude universe is really one-dimensional, any sampling of items from it should also be one-dimensional, and should provide an ordering of respondents essentially the same as that provided by any other sampling of items from the universe. If the predicted ordering does not occur, the universe is judged to be multi-dimensional and consequently not scalable. It is possible, of course, that items have been included which do not refer to the universe of content. These non-scale items might be excluded; however, item exclusion must be exercised with caution (Green, 1954, p. 357). If items do suggest an underlying single dimension, it is meaningful to describe a respondent with a higher total score as possessing more of the characteristic being measured than someone with a lower total score. Most important, if scale properties are obtained, this provides evidence for the existence of a defined body of opinion in the respondent group in respect to the particular area of measurement involved. The fact that item scales are obtained in each of two or more countries being compared is evidence for concept equivalence, regardless of variation in the content of

the particular items in the scales from one nationality group to another.

In Guttman scaling, the focus is on the ranking of respondents rather than on the ranking of items. "We shall call a set of items of common content a scale if a person with a higher rank than another person is just as high or higher on every item than the other person" (Guttman, 1950, p. 62). The individual item responses of every respondent should be reproducible (with about 10% error allowable) from a knowledge of his total score rank. The amount of error which is allowable in reproducing item scores from a knowledge of respondent total scores rank has been somewhat arbitrarily established at 10%, although Guttman has shown that if the errors are random in a given sample of 100 persons and 5 dichotomous items, the population reproducibility should not vary more than 4 or 5 per cent from the reproducibility coefficient of the sample (1950, p. 77).

Guttman has also described the quasi-scale,¹ which may occur when the reproducibility of a scale is lower than the required 90%, but when the errors occur in a random pattern. Stouffer (1950, p. 5) notes that "the correlation of the quasi-scale with an outside criterion is the same as the multiple

¹The analysis of scales employed in the present study would appear to place them in the category of quasi-scales.

correlation between responses to the individual items forming that scale and the outside criterion (which) justifies the use of sets of items from an area not scalable in the strictest sense." It should be pointed out that the criterion of 90% reproducibility is no more an absolute standard than is the selection of an alpha of .05 for a test of significance. For some purposes a lower limit may be satisfactory, for others a higher limit may be a necessity. The important criteria in respect to scale error would seem to be the random nature of occurrence of the errors. "The error pattern of the quasi-scale question is recognizable from the manner in which the fairly large number of errors that occur gradually decrease in number as one moves further and further away from the cutting point.² These errors...do not group together like non-scale errors" (Suchman, 1950, pp. 160-161). This appears to be the error pattern obtained on the scales used in the present study.

²The "cutting point" refers to the point at which the "favorable" (or, e.g., "yes") responses to an item, can be divided with the least amount of error from the "unfavorable" (or, e.g., "no") responses to an item, when the respondents have been ordered on the basis of total score for all items in the scale.

Scale and Intensity Analysis in
Relation to Cross-National Problem
of Comparability of Responses

Once scaling has been established so that there is some indication of unidimensionality, there remains the question of how to divide the respondents on the basis of the favorableness or unfavorableness of response. Foa (1950) and Suchman (1950, pp. 214-215) have shown how question bias can be introduced through slight changes of question wording so that the response patterns of a set of questions may be altered considerably. What is needed is an objective "O" point, independent of the content of the items, which will divide the favorables from the unfavorables.

The method proposed is to ascertain for each item how intensely the respondent feels about the item. It has been shown experimentally (Foa, 1950, 1961; Guttman, 1947, 1950; Guttman and Foa, 1951; Guttman and Suchman, 1947; Suchman, 1950; Suchman and Guttman, 1947) that intensity will usually form a quasi-scale which, when plotted against the content dimension, will reveal the point on the content scale of the lowest intensity of response. This point has been empirically established as a point of indifference in respect to the item content. Attitudes become favorable on one side of the point and unfavorable on the other side of the point. It then becomes possible to state in respect

to a particular group about what per cent of the respondents are actually favorable, neutral, or unfavorable, as defined by an objective and invariant referent point.

This concept is of great potential significance for cross-national research, since it offers an objective technique for comparing persons from one culture to another, regardless of subtle meaning changes resulting from translation problems, providing that the item content is scalable within each of the countries being compared. Both the point of division, and the shape of the intensity curve are of interest. The shape of the curve may indicate whether people are generally apathetic about the issue at hand or are sharply divided into opposing groups. These potential benefits of scale and intensity analysis recommended their use for the present study.

CHAPTER III

METHODOLOGY AND PROCEDURES

The purpose of this study was to investigate technical, methodological and theoretical considerations relating to the cross-cultural investigation of attitudes toward education and toward physical disability. An attempt was made to employ a set of instruments which elicited attitudes toward education and toward physical disability (Appendix B-1 and B-4) as well as a comparison of these attitudes on selected groups within Colombia and Peru and a limited comparison between these countries and the United States (Wichita, Kansas) on the special education and rehabilitation group.

Rationale for Selecting Samples from Colombia and Peru

The selection of Colombia and Peru provided a population differing in language, culture, and values from the United States. This provided for a more rigorous test of the assumptions underlying the instruments. It also met the needs of a larger study¹ currently being conducted throughout Latin America as well as in the United States, Europe, Africa, and Asia.

¹ The larger study is under the direction of Dr. John E. Jordan, College of Education, Michigan State University.

Colombia and Peru have active, if limited, programs in the area of special education and rehabilitation. The people working in this area provided one of the groups to be compared in the study.

Bogota and Lima also provided readily accessible public transportation which put all of the respondents in the study within easy geographical reach.

There were also people, both American and national, who were vitally interested in the nature of the research and offered their assistance in translation and interpretation as well as in providing the necessary contact with institutions, agencies, and significant persons.

General Description of Colombia

Geography

Colombia is unique in the fact that it is the only South American country with coasts on both the Atlantic and Pacific; the Atlantic coast runs for 1,110 miles while the Pacific coast line is 191 miles long. This country, which borders Ecuador, Peru, Brazil, Venezuela, and Panama, is the fourth largest in South America and the seventh largest in the western hemisphere. In size it can roughly be compared to the combined area of the states of Arizona, New Mexico, Nevada, and California (Lindow, 1964, p. 1) -

The western part of the country is extremely mountainous. Here the Andes are made up of three well defined ranges. The bulk of the country's people live in the valleys and basins between these ranges. More than 60% of the Republic is covered with forest (Social Progress Trust Fund, 1963, p. 189).

Population

The population of Colombia was estimated at 14.76 million in 1962. Based on the annual growth rate of just under three percent, the population will reach an estimated 19.7 million by 1970 (Lindow, 1964, p. 2). The post-war period has been characterized by rapid urbanization and as a result the urban and rural population are now nearly equal in size. The economically active population, which numbered five million in 1963 (Lindow, 1963, p. 190), is fairly evenly divided between the rural and urban areas. Fifteen cities have an estimated population of over 100,000. Geographically the population is very unevenly divided. Only ten percent inhabit 60 percent of the territory while the remaining 90 percent inhabit the remaining 40 percent of the area. The population is highly concentrated in the western part of the country (Lindow, 1964, p. 4).

Economics

Colombia not only has better diversification in terms of natural resources than most of her Latin American neighbors but also is in the enviable position of having these resources well distributed throughout the several regions of the country. It has an abundance of arable land and climatic conditions that make it possible to cultivate a great variety of products every month of the year. According to the Overseas Business Report (April 1964, p. 7), Colombia is the largest producer of mild coffees, and exports about 13 percent of the coffee that moves in international trade.

Bananas are also the third most important earner of foreign exchange. Wheat, cotton, sugar cane, tobacco, corn, beans, peas, lentils, chick peas, yucca, potatoes, and rice are also grown in fairly adequate quantities (Lindow, 1964, p. 29).

Colombia possesses extensive and varied mineral resources. The development of these resources have been greatly hampered by inadequate transportation facilities. Colombia is the largest producer of gold in South America and the chief source of emeralds in the world. The salt reserves are said to be practically inexhaustible. If the estimate of 18 billion metric tons of coal reserves is correct, Colombia is the richest country in Latin America as far as coal is concerned.

One of the most dynamic factors in the Colombian economy is the manufacturing sector. In terms of output, employment and enterprise, the major industries are in foodstuffs, beverages, and textiles (Lindow, 1964, pp. 6-13).

Politics

Colombia is a republic which elects a President and a Senate every four years and a House of Representatives every two years. The right of suffrage is constitutionally provided to all citizens over 21 years of age.

Under a unique arrangement, the two traditional parties, Conservative and Liberal, share equally in all levels of electoral office until 1974. This includes the presidency which alternates between parties every four years (Lindow, 1964, p. 5).

Education

In 1962, 37 percent of the population 15 years of age and over was illiterate. At all education levels, there is a considerable gap between the number of those who should receive schooling and those who do receive it. There are too few schools and the drop-out rate is high. At the university level, the prevailing academic structure does not correspond to the country's needs for economic and social development. It orients far too many of the students toward traditional studies. Recently, however, a

start has been made in modifying these characteristics. Many centers of higher learning are carrying out important academic and administrative reforms, and students are showing a great interest in science and technology (Social Progress Fund, 1963, p. 193).

Most Colombian universities are organized in faculties which teach all of the courses taken by students in their given field of specialization. This obviously results in duplication of courses. In 1963, the University of the Andes in Bogota, the University of Antioquia in Medellin, and Valle University in Cali initiated a process of "inter-faculty departmentalization", which was designed to eliminate this kind of duplication.

The University of the Andes, through an agreement with the University of Minnesota, took another step away from the traditional educational program by starting a four-year program designed to train professors in economic theory as well as to stimulate economic research with special emphasis on development (Social Progress Trust Fund, 1963, pp. 193-203).

The creation of the National Service of Apprenticeships (SENA) was an important event in the field of industrial training.

By the end of 1960, it was supported by 14,858 companies and its annual income was approximately 22 million pesos. SENA, with the assistance of owners and workers, is administering a national apprenticeship system for professional and cultural training of workers in industry, commerce, agriculture, livestock, management and mining (Social Progress Trust Fund, 1961, p. 89).

Special Education and Rehabilitation Services

Publications of the International Society for Rehabilitation of the Disabled reported in 1963 that "there has been no interest in a governmental level in rehabilitation nor was information obtainable about legislation favoring the handicapped. No surveys have been made on the incidence of disabilities either by governmental or voluntary agencies (Hess, 1963, p. 2).

However, legislation was enacted in 1940 to establish the Federacion Nacional de Ciegas y Sordomudos (National Federation for the Blind and Deaf). This organization conducts, plans, and develops services within the country for the blind and deaf (VRA, 1964, p. 43).

The Franklin D. Roosevelt Institute, a center for crippled children ranging from infants to 15-year old teenagers, was founded in 1947. It has a capacity for 250 inpatients and its own surgical facilities, braceshop, and education program. By 1955, the Institute had provided rehabilitation services for more than 2,000 children severely handicapped by poliomyelitis, cerebral palsy, congenital malformations, and other disabilities. In that same year a severe poliomyelitis epidemic resulted in a waiting list of 5,000 children seeking admission.

The Institute has its own bus to transport the children which facilitates the operation of an outpatient clinic for medical consultation and physical therapy treatment in downtown Bogota. Services are normally provided without charge. Sixty percent of the annual budget is provided by the Colombian government while the balance comes from private contributions (VRA, 1964, p. 43). A new site has been selected and building plans have been developed. New and more adequate facilities will greatly enhance the services now provided by the Institute.

The rehabilitation services of the Military Hospital provide a unified medical, health, and hospital system which receive both military and civilian referrals. It has an excellent physical plant with fine treatment facilities centrally located in Bogota.

There are at least 14 schools or organizations serving the blind in Colombia. Five of these institutions are in Bogota. The Instituto Colombiano Para Ciegos y Sordomudos de Bogota offers primary education and provides vocational training for those who do not plan to enter a profession. It is supported by government grants and from funds derived from investments.

The Instituto de Ntra. Senora de la Sabiduria para Ninas Ciegas y Sordomudas, a girl's school for the blind and deaf, provides secondary education and some vocational training (VRA, 1964, p. 44).

Mr. Hernando Pradilla heads the Centra de Rehabilitacion para Adultos Ciegos, a private rehabilitacion center for blind adults. The growth of this young agency reflects a "grass roots" potential which could have national implications given imagination and the right stimulation.

General Description of Peru

Geography

Peru, a country of varied and abundant natural resources with a relatively diversified economy, is divided into three distinct geographical regions: the coast, the mountains, and the jungles. Each area has its own economic and social character.

The long coast line has favored trade as well as the fishing industry. Although the narrow strip of land along the coast is an arid desert, there are a number of permanent streams which originate in the Andes and cross the desert. These rivers provide the water necessary to support intensive and highly commercialized agricultural activity.

The Andean Highlands include the various ranges of the Andes as well as many intermountain basins and valleys in which the population is concentrated. The extremely rough terrain has impeded development of communication both within the region and

between it and other parts of the country. There are few large cities. While the Highlands area comprise only 27 percent of the area of Peru, it accounts for 70 percent of its population.

The jungle region, sometimes known as the Selva, includes the lower part of the valleys which emerge from the Andes, the eastern slopes of the Andes, as well as the flat lowlands of the Amazon Basin. This hot, densely forested area is virtually uninhabited except along the banks of the major streams and in the vicinity of the few roads which have penetrated its western border in the last 20 years (Social Progress Trust Fund, 1963, pp. 344-346).

Population

Peru's 11 million population in 1963 (11,600,000 in 1963) was made up of 4.6 million (42%) in urban population and the remaining 58% in rural population. Its growth rate over the last decade is estimated at 2.3%, which if continued, will produce a 1970 population figure of 14 million persons. At the same time, the urban population is expected to increase more rapidly so that by 1970 the urban and rural populations should be about equal (Social Progress Trust Fund, 1961, p. 183).

The largest single racial group are pure blooded Indians, who comprise about 46 percent of the total Peruvian population. About 37 percent are from mixed Indian and Caucasian strains, known as mestizos, while roughly 15 percent are of European descent. Only two percent are of Negro or oriental origin.

Although Spanish is the official national language, it is used by only 46 percent of the people. Thirty-five percent of the population speak only Quechua or Aymara, the two main Indian languages (Freeburger and Hauch, 1964, p. 1).

Economics

Peru occupies about 6.4 percent of the combined area of the 20 Latin American Republics and has just over five percent of the total population. However, it accounts for only 2.5 percent of the regions' production. During the 50's its output increased at a rate below the average for Latin America. From 1960 to 1963, however, the gross national product grew at an annual rate of about three percent per capita (Social Progress Trust Fund, 1963, p. 345).

Agriculture, livestock, and fisheries contribute slightly more than 25 percent of the gross national product. While mineral resources and mining contribute 15.5 percent of the GNP, Peru has not yet begun to realize its mining potential.

It is interesting to note that while agricultural activities account for less than one fourth of the GNP, more than 60 percent of the population is engaged in agriculture (Freeburger and Hauch, 1964, p. 1).

Government

The present Constitution formulated in 1933, designated Peru as a democratic republic. Economic, social, and individual rights as well as freedom of the press, religion, and assembly are guaranteed.

The government is highly centralized and the principal administrative officials are presidential appointees. The main political subdivisions of the Republic are departments, provinces, and districts. There are 23 departments, 135 provinces and 1,259 districts.

The President of the Country is elected by direct vote for six years. The Senators are elected by the departments and the Deputies are selected by the Provinces, each for terms of six years.

Education

According to the report on the development of education presented by the Peruvian Minister of Public Education at the 1963 Conference of Ministers of Education in Bogota, Peruvian education is primarily suffering from the lack of a well defined education policy directed toward the economic and social development of the nation. The educational problems are further complicated by an underdeveloped economy, inadequate transportation and lack of communication facilities; the high rate of illiteracy, and the lack of integration of the indigenous population into the national life; the shortage of teachers and their inadequate preparation; the excessive centralization of the administration and direction of education; and the lack of financial resources to implement a program for the improvement and development of education (Freeburger and Hauch, 1964. p. 41).

Preliminary figures from the 1961 census indicate that 53 percent of Peru's populations, 14 years of age and over are illiterate. However, in the Sierras where the largest concentration of the Indian population are located, this figure increases to approximately 73 percent. Among the white and mestizo populations, this figure decreases to as low as 29 percent.

The illiteracy problem results not as much from racial as from linguistic factors. Most of the illiterate population are Indians who speak only their own dialect.

A number of efforts have been made to deal with the illiteracy problem. The Military Junta declared 1962 as "The Year of Literacy Training". Under the direction of the Department of Rural Education and Illiteracy, teachers, students, civil guard units and returned military personnel were used to implement the literacy campaign through the use of radio and television broadcasts.

Mining, agricultural and industrial enterprises are required by law to conduct education classes for illiterate employees between 16 and 40 years of age. These classes are under the supervision of the Director of Adult Education (Freeburger and Hauch, 1964, pp. 37-40).

Vocational schools do exist but do not seem to be very effective. The Ministry's report indicates that vocational

schools are not providing a basic education for students to continue studies at institutions of higher learning nor are they giving the students adequate training in order to qualify for jobs in industry (Freeburger and Hauch, 1964, p. 42).

Peruvian educators are also faced with a major school drop-out problem. A 1957 inventory showed that of the total number of students who entered elementary schools only 15.1 percent completed grade 4 and 5.6 percent entered the fifth grade. The greatest rate of drop-outs was in the transition between the first and second grades.

Secondary education has also been faced with massive problems. Excessive memory requirements, lack of libraries, poorly equipped laboratories, and poor teaching methods have contributed to the ineffectiveness which have plagued the secondary schools.

Peruvian universities have been faced with such problems as part-time students, part-time professors, poor physical facilities, political activities of the students and lack of financial resources (Freeburger and Hauch, 1964, p. 47).

The best known university in Peru is the National University of San Marcos. Founded in 1551 by a royal order of Charles V of Spain, it is regarded as the oldest institution of higher learning in the Americas.

While most universities in Peru are rather traditional, some universities are introducing innovations which will have far reaching effects. The Universidad de San Cristobol de Huamanga, which reopened in 1962, initiated a program based on applied study and research. It prohibits partisan politics, requires full-time attendance from professors and students, and makes the Quechua language a compulsory academic subject (Freeburger and Hauch, 1964, p. 32).

Prior to 1961, the Pontifical Catholic University of Peru was the only private university of higher education in Peru. Since 1961, five new private universities have been established.

Special Education and Rehabilitation Services

In 1962, it was estimated that there were 700,000 physically or mentally handicapped persons in Peru. Of this number 500,000 were deaf, mute, blind, amputees, paraplegics, polio victims, etc., and about 200,000 were classified under mental retardation and cerebral paralysis.

Perhaps the most influential organization providing services to the disabled is the Patronato Peruano de Rehabilitacion y Education Especial, which is affiliated with the International Society for Rehabilitation of the Disabled. The Patronato, founded in 1959, is supported by the proceeds of a 10 percent tax on lot-

tery winnings as well as by voluntary contributions from private sources.

Several organizations affiliated with the Patronato provide such services as employment promotion for the handicapped and vocational training for amputees. A hearing and speech center known as the Centro Peruano de Audicion y Lenguaje and a special education school known as the Institute San Gabriel Arcangel are also associated with the Patronato.

The Hospital Militar Central has excellent facilities and its own staff of physiotherapists. While it primarily serves veterans, its services are available to civilian children and adults on a limited basis (VRA, 1964, pp. 133-135).

Research Population

Colombian Sample

The three groups in this sample consisted of 241 adult men and women. The groups were represented as follows: laborers - the L group (both blue and white collar workers) - an N of 46; the SER group (all from Roosevelt School of Bogota) - an N of 67; elementary school teachers - the EE group - an N of 106 and secondary school teachers - the SE group - an N of 22. Plans were made to administer the questionnaires to an executive group in

Bogota. These plans, however, did not materialize in time for this study. If they are secured later, they will be utilized by Dr. John E. Jordan in the large on-going international study.

Peruvian Sample

The research sample consisted of 134 adult men and women who were classified either as (a) manager/executives - the M group or (b) professional personnel who worked with disabled persons in Peru - the SER group. Initially, data was to be gathered from two other groups, (blue and white collar workers and primary/secondary school teachers), but due to factors beyond the researcher's control, this data was not received.¹

Group M, with an N of 96, consisted largely of middle echelon government officials who will have responsibility for establishing government policy for employment (both in and out of government) of the handicapped and non-handicapped as well as being involved in the actual employment of both groups. In 1965, there were two training institutions for manager/executives in Lima. One of these institutions, known as Oficina Nacional de Radionalizacion y Capacitacion de la Administracion Publica (ONRAP), was assisted by the New York School of Public Adminis-

¹ Since this chapter was written the teacher group has been collected. They will be analyzed in the larger study under the direction of Dr. John E. Jordan.

tration. The other school, Escuela de Administracion de Negocios Para Graduados (ESAN), was assisted by Stanford University. Both of these American universities were under contract with the U.S. government via the Alliance for Progress program.

The data from the SER group, with an N of 39, was gathered by Mr. Enrique Unger, who with his wife were also responsible for translating the research instruments into Peruvian Spanish. This N represents a high percent of the research universe in Lima.

United States Sample: Kansas

This sample included 22 men and 81 women from the SER group working in the vicinity of Wichita, Kansas. The Kansas sample was gathered as one of the sub-samples of a broader study by Messieurs Dickie and Weir and their complete studies will appear as doctoral theses under the direction of Dr John E. Jordan.

Selection of Variables

The selection of variables (Appendix C-1) was dictated mostly by theoretical considerations already reviewed and partly by well-established sociological tradition in respect to the selection of demographic variables.

The theoretically-dictated variables were mainly those suspected to be in some particular relationship to the criterion

variable of attitudes toward education and toward physical disability. Other variables were included, however, which were intended to provide information in respect to the characteristics of two groups of respondents: (a) education personnel, and (b) those who work with the handicapped. These variables are those of: (a) mobility, (b) personalism, (c) institutional satisfaction, (d) religiosity, and (e) change orientation. The fact that some of these variables were found to have a relationship to scores on the criterion measure was largely fortuitous to the design of the research.

The major variables used in the study are discussed in the following section.

Attitudes Toward Physical Disability

The items used in this scale were taken from the Attitudes Toward Disability Scale (Yuker, et al., 1960). Adequate test-retest reliability scores were reported, and various construct validity measures which were all collected from disabled employees of Abilities, Inc. of New York, a light manufacturing company which employs disabled workers. Among these employees the test was found to be negatively related to age and anxiety, and positively related to verbal intelligence and job satisfaction. Although the validating group has questionable generality and the

rationale for item selection is not clear, the test represents an attempt to fill a gap in the field and deserves further study. It seems to be the only instrument available.

Modifications were made in the provisions for respondent scoring. The Likert-type format was retained, but the response categories for each item were reduced from seven to four. A further modification was that instead of requiring the respondent to transfer a number from a set of coded categories at the top of the page to indicate his response the item alternatives were stated following each question (Appendix B-4). It was felt that these modifications would simplify the task for the respondent. Since it was intended to submit the items to scale analysis rather than follow the suggested scoring system, there was no need to retain the same numerical scores.

Fifteen of the 20 attitude items are statements of differences between disabled persons and those not disabled, and agreement with those statements is interpreted as reflecting an unfavorable attitude.

Attitudes Toward Education

Modifications similar to those described above were made on the Attitudes Toward Education scale developed by Kerlinger (Kerlinger, 1958, 1961; Kerlinger and Kaya, 1959). The scales

were included for two reasons: first, because they are short and simple to administer; and second, because there is a rationale in Latin American countries for hypothesizing a relationship between progressive attitudes toward education and positive attitudes toward physical disability. The scales represent a factor analysis of a set of 40 items given to 598 subjects of varying backgrounds, but all apparently of above average education. The scales have been found to hold up under cross-validation; however, there is no indication that persons of lower educational attainment have been adequately represented in the studies. A surface examination of the items (Appendix B-1) suggests that some of them may be somewhat overly complex and difficult for many people. The complete instrument consists of 20 items, of which 10 are "progressive", and 10 "traditional". As employed in this study, the progressive and traditional items were analyzed independently as two separate scales.

The Intensity Scales

A simple approximation of the intensity function has been successfully attained by asking a question about intensity after each content question. One form used for an intensity question is simply: "How strongly do you feel about this?" with answer categories of "Very strongly", "Fairly strongly", and "Not so strongly". Repeating such a question after such content question yields a series of intensity answers. Using the same procedure as ... for content answers, these are scores and each respondent is given an intensity score. The

intensity scores are then cross tabulated with the content scores (Suchman, 1950, p. 219).

This procedure was the one adopted to measure intensity for both the attitude items relating to handicapped persons and to education. Four response categories were used instead of the three suggested by Suchman.

Interpersonal Values

In selecting the Gordon Survey of Interpersonal Values (Gordon, 1960), two factors were considered: first, an instrument was needed which would yield scores on items that seemed logically related to the values under test in the hypotheses, those of "asset" orientation to others, and "comparative" orientation to others. Of the six sub-scales in the instrument, the one for Benevolence is described as follows: "Doing things for other people, sharing with others, helping the unfortunate, being generous" (Gordon, 1960, p. 3). Among studies presented in a subsequent research brief, Benevolence was found to correlate .49 with the Nurturance score on the Edwards Personal Preference Schedule (EPPS) and negatively with Achievement (-.24) and Aggression (-.28) (Gordon, 1963, p. 22). It was decided on the basis of the description, the item content, and the inter-correlations with the EPPS that the Gordon Benevolence Value would be an adequate operationalization of the "asset value".

The second value to be operationalized was that of a "comparative" orientation toward others. The Gordon manual offers the following definition for Recognition Value: "Being looked up to and admired, being considered important, attracting favorable notice, achieving recognition" (Gordon, 1960, p. 3). The following definition was offered for Conformity Value: "Doing what is socially correct, following regulations closely, doing what is accepted and proper, being a conformist" (Gordon, 1960, p. 3). Leadership was defined as "Being in charge of other people, having authority over others, being in a position of leadership or power (Gordon, 1960, p. 3). All three of these values would appear to involve rankings of others on some kind of absolute scale, either of social acceptability (Conformity), achievement (Recognition), or power (Leadership). On the basis of surface consideration of such content the Recognition and Leadership items were judged to be most representative of Comparative Values.

A second consideration was the validity of the Gordon scale in a different cultural application than the one for which it was designed. The author of the instrument was able to furnish a preliminary mimeographed Spanish translation of the instrument but no reliability or validity data were available. However, translations in French and Japanese (Gordon, 1963, pp. 17-21)

yielded scores between known groups consistent with expectations. The forced-choice format of the instrument may also be less sensitive to subtle shifts in item meaning resulting from translation than a format in which each item is separately responded to as "agree" or "disagree", or according to a Likert-type format. It is expected, however, that in the present study some estimate of validity may be obtained through confirmation of predictions about the values of known groups used in the study (predictive validity), and from expected relationships between other scores (Concurrent validity).

Personal Contact Variables

Two types of variables related to personal contact were represented by 15 items in the questionnaires. Four items were related to educational contact, nine items were related to contacts with physically disabled persons, one item to contact with mentally retarded, and one item dealt with contact with emotionally disturbed persons. Each item generated a score. Single-item scores are notoriously unstable, and no reliability data can be offered. There is some evidence of the predictive validity of some of the items, in respect to expectancies that known groups should respond in certain ways. For example, it was expected that persons working in SER would report a higher frequency of contact

with disabled persons than would persons not working in the field of disability. This was indeed the case in Costa Rica (Felty, 1965) and might be considered an item validation.

Contact with Education

These items (PQ¹ 4-7) requested respondents to indicate: (a) how much they had worked in schools or educational settings--number 4; (b) what percent of income was derived from such work--number 5; (c) how they felt about such work--number 6; and (d) what other work opportunities they could have alternatively chosen--number 7.

Contact with Physically Disabled

These items (PQ: HP 1-9) requested respondents to indicate: (a) the kind of physical disability with which they had had the most contact, or knew the most about - numbers 1 and 2; (b) the type of relationship they had had with physically disabled persons--family, friends, working relationships, etc. - number 3; and (c) the approximate number of encounters they had had with physically disabled persons - number 4. Other questions attempted to explore alternative opportunities - number 9, enjoyment of contact with handicapped persons - number 8, ease of avoidance of such

¹ Throughout the dissertation PQ will refer to Personal Questionnaire; PQ-HP will refer to Personal Questionnaire-Handicapped Persons.

contacts - number 5, gain from contact - number 6, percent income from working with - number 7.

Preferences for Personal Relationships

This set of three items (PQ 21-23) was devised to help identify respondents, or groups of respondents, along a traditional-modern dimension. The predominance of affective relationships as opposed to affectively neutral relationships is supposedly one of the distinguishing characteristics of the "Gemeinschaft", or traditional, orientation (e.g., Loomis, 1960, p. 61ff). Question 21 asked the respondent to indicate the approximate percent of personal interactions on the job which were with persons who were close personal friends. Question 22 asked how important it was to work with persons who were close friends. Question 23 was intended to measure diffuseness or specificity of personal interactions under the hypothesis that the traditionally oriented person is more likely to have personal interactions which are diffused between job and family, or other affective non-job interactions. "Members of the Gemeinschaft like system are likely to know each other well, their relationships are functionally diffuse in that most of the facets of human personality are revealed in the prolonged and intimate associations common to such systems" (Loomis, 1960, p. 72). The SER group, then, being committed to

"asset" values (by hypothesis), being more concerned with intrinsic valuation of the person rather than valuing him for his absolute achievements, should also express a greater need for personal interactions generally, and a greater diffuseness of interpersonal relationships.

Institutional Satisfaction

This was a set of nine questions (PQ 31 A-1) adapted from Hyman (1955, p. 400). The institutions selected (schools, business, labor, government, health services, churches) were listed and an opportunity offered to indicate whether they were judged excellent, good, fair, or poor in respect to how well they do their particular job in the community. It was postulated that people working in SER would be less satisfied with institutions generally than other groups. Persons with high education in relation to income might also be expected to be less satisfied than others. Again, no reliability estimates are offered, and validity will be a function of concurrent correlation coefficients.

Change Orientation

This set of six questions (PQ 39-43 and 47) were adapted from Programa Interamericano de Informacion Popular (PIIP) in Costa Rica. The respondents were asked to react to a number of statements which purported to reflect attitudes toward change in

such areas as health practices, child rearing practices, birth control, automation, political leadership, and self change. Four response alternatives to indicate the degree of agreement were given: strongly agree, slightly agree, slightly disagree, and strongly disagree. It was postulated that people working in SER would have responses which suggested a greater flexibility and openness toward change. This favorableness toward change would, of course, challenge many existing cultural norms. On the other hand, the M or L group might be expected to respond in ways which suggested resistance to change.

Demographic Variables

Respondents were asked in the PQ to indicate their placement on several variables often found to be of significance in sociological analysis: these were education (26, 27), occupation (37), rental (30), age (8), sex (face sheet), marital status (12), number of children (13), number of siblings (16, 17), home ownership (29), mobility (11, 12, 15), and rural-urban youth (9). In the dissertation analysis, not all of these variables will be used because of time and space limitations. All of these variables will be utilized more fully in the larger study being conducted by Dr. John E. Jordan, Michigan State University.

Religiosity

See Appendix C-9.

Collection of Data

All of the data was collected by group administration of the instruments. With two exceptions, either the author or Dr. John E. Jordan of Michigan State University, was present during the administration of the instruments to the various groups.

The following procedures (Appendix C-2) and instructions were carefully followed in both countries: (a) a statement of appreciation for the cooperation of the group; (b) a general statement of the reason for the investigation; (c) a statement of the format of the administration; (d) and an oral explanation of the various instruments.

The instruments were administered in the following order:

1. Definitions of Disability
2. Attitudes Toward Education
3. The Survey of Interpersonal Values
4. The Personal Questionnaire
5. Attitudes Toward Handicapped Persons
6. The Personal Questionnaire (Handicapped Persons)

In each case the test administration was done through an interpreter. An undetermined factor in the investigation is the effect that may have been introduced through the instruments being administered by a foreigner through interpreter; however, this effect was constant through the administration, with one exception. Mr. Jack Hopkins, a United States graduate student working in Lima, administered the test using only the Spanish language.

Statistical Procedures

Descriptive

Two frequency Column Count Programs (Clark, 1964) designated as FCC I and FCC II, were used. These programs were used to compile the frequency distributions for every item. This proved to be a very useful step in selecting variables for analysis and in gaining a clinical "feel" for the data.

Scale and Intensity Analysis

The general procedures are discussed by Suchman (1950, Chps. 4 and 7). In working with Likert-type items, two problems arise which call for special techniques. The first is that of organizing the respondent-item matrix so that items can be dichotomized with the aid of visual inspection and counting. Once the items are dichotomized into 0, 1 categories the second problem, common to all Guttman-type scale procedure, is that of re-ordering respondents in the order of their new total scores, and then recording the items for inspection of the resulting scale pattern.

Various techniques have been proposed such as the use of specially constructed boards which employ shot to indicate item responses (Suchman, 1950, Chp. 4). A technique employing no special equipment except a typewriter was suggested by Waisanen

(1960), which is appealing by virtue of its simplicity. While the Waisanen technique was very helpful, the "CUT" Computer program, developed by Hafterson (1964) at Michigan State University, saved numerous hours of work and avoided errors which have resulted from a longer and more tedious method. The program determined each possible cutting point as well as the number of errors involved in each cut. The dichotomized items were then scaled by the Multiple Scalogram Analysis program in use with the CDC 3600 Computer at Michigan State University (Lingoes, 1963; Hafterson, 1964). All scales, for both content and intensity, were submitted to the same procedure.

The procedure for combining the content and intensity scales is described by Suchman (1950, Chp. 7). The basic procedure is to form a matrix of scores such that total intensity scores are entered on the vertical axis and total content scores are entered on the horizontal axis. Respondents are tabulated in the resulting cells on the basis of the two total scores received for each scale; one in content, one in intensity. For each content rank, a median intensity score is computed. The curve of intensity on content is formed by these median scores. The lowest point of the curve represents the psychological "0" point which divides favorable from unfavorable opinion or attitude (Suchman, 1950, pp. 220-223).

Mean Differences Analyses

For convenience of computer programing, the F statistic was used for all testing of mean differences, even though differences between two means are usually tested by the t statistic. The results are the same (Edwards, 1960, p. 146). If an F between two means is significant, inspection of the size of the two means will indicate which one is higher and thus the main contributor to the differences reflected in the F.

Since a significant F merely shows that the variance projected in the hypothesis is greater than could be expected by chance the specific relationship between the dependent variable and the variable represented by the levels or groups must be investigated. Duncan's New Multiple Range Test (Edwards, 1960, pp. 136ff), as extended for unequal replications by Kramer (1960), will be used to investigate the extent to which a particular subgroup mean contributes to the total variance represented by the F test. This will enable the researcher to order the group means from high to low and then to examine the "difference" between successive pairs-of-means to ascertain which one(s) do in fact statistically depart from chance at a stated level of significance.

The UNEQ1 routine (Ruble, Kiel, Rafter, 1966) was used to calculate the one-way analysis of variance statistics. The pro-

gram is designed to handle unequal frequencies occurring in the various categories. In addition to the analysis of variance tables, the frequency, sums, means, standard deviations, sums of squares, and sums of squared deviations of the mean were included for each category. The approximate significance probability of the F statistic is also included. This convenient figure enabled the researcher to know at a glance whether or not the F was significant without referring to a table. For example, if the number printed out was .05, the level of confidence, with the appropriate degree of freedom, for a given F would be .05. However, if .00 was printed out, the level of confidence was to be considered to be .005 or less.

UNEQ1 also contains provision for designating one or more dependent variables as missing for an observation, but incorporating other dependent variables listed on the Analysis of Variance table as non-missing. The observation is then ignored for all dependent variables with missing values, but used in the analysis for all dependent variables with non-missing values. The number of missing values in each category is printed after the table giving statistics for the categories for each dependent variable.

Relational and/or
Predictive Analyses

Partial correlation is one of the outputs of the general multiple regression model used in the CDC 3600 program at Michigan State University (Ruble, Kiel, Rafter, 1966). One benefit of the use of partial correlation is that a number of variables which are assumed to have some relationship to a criterion, or dependent variable, can be examined simultaneously. Often, when a series of Pearsonian product-moment r's are computed between a criterion and a set of variables considered to be predictors of the criterion, spurious conclusions may be obtained because the predictor variables are themselves interrelated, rather than directly predictive of the criterion. In a partial correlation solution to the problem these relationships among the predictor variables are taken into account in computing the true correlation of each variable with the criterion. That is, the effects of all but one variable are held constant. The use of multiple regression analysis is recommended by Ward (1962, p. 206) because it "not only reduces the dangers inherent in piecemeal research but also facilitates the investigation of broad problems never before considered 'researchable'."

In the CDC 3600 MDSTAT program (Ruble and Rafter, 1966) a great deal of data can be gathered from one analysis. Separate

analyses can be done for the total group and for any number of specified sub-groups, or partitionings, of the data. For each specified group (e.g., total, male-female, etc.) a number of statistics can be requested. Those used for each partitioning in this research project were: means and standard deviations for each variable, the matrix of simple correlations between all variables, the multiple correlations of selected variables on the criterion, the beta weights of all (i.e. those used) predictor variables, a test of significance for each beta weight, and the partial correlations between each predictor and the criterion. In actual practice, only the descriptive statistics, the zero-order correlations, the multiple correlations, and the partial correlations have been used in the analysis. Tests of significance of the correlation coefficients from zero are the usual ones, with tables entered for the appropriate degrees of freedom.

Several multiple regression analyses were done. The first set of analyses used as a criterion the total raw scores from the handicapped persons scale, the second set used respectively the total raw scores on the progressive and traditional education scales, and the third set used the scores from change orientation items. Since the computer program for multiple regression did not "handle missing data", all missing data was recoded at the mean of the variable for all multiple regression analyses.

Major Research Hypothesis

Hypothesis Related to Scaling

H-1: Each set of attitude items employed in the study (Appendix B-1, 4) represents an underlying one-dimensional universe of content, so that Guttman scale analysis will yield a scale or quasi-scale of attitude items.¹

1. Attitude-toward-disabled-persons items will yield a Guttman scale or quasi-scale.
2. Traditional-attitude-toward-education items will yield a Guttman scale or quasi-scale.
3. Progressive-attitude-toward-education items will yield a Guttman scale or quasi-scale.

H-1 Hypothesis Derivation: The utility of scaling for cross-national research has been discussed in Chapter 3. The basis for the assertion of the hypothesis in respect to each national sample and the attitude-object-group of physical disability, rests on the assumption that disabled persons represent a salient group in the particular nation so that people will hold opinions in respect to them, either on a favorable-unfavorable, or a different-similar continuum. The basis for the assertion of the hypothesis in

¹ For this hypothesis, and all following hypothesis in which statistical tests of significance are included, the statement of the hypothesis is in the research form rather than the null form for purposes of clarity. It should be understood that in the statistical analysis it is the null form, either one-or-two tailed, which will be tested.

respect to the education items, rests on the original factor derivation of the "traditional" and "progressive" items by Kerlinger (1958, 1961), and on pre-test scaling of these items in Lansing, Michigan in March of 1964, in which "traditional" items were found to scale independently of "progressive" items among a sample of 97 students and job re-training workers.

H-1 Instrumentation: The attitude scales, as modified for the present study, are found in Appendix B-1, 4.

H-2: For each attitude scale the plotting of intensity scores against content scores will yield a U-shaped or J-shaped curve.

1. For attitude-toward-disabled-persons items, the plotting will yield a U or J-shaped curve.
2. For traditional-attitude-toward-education items, the plotting will yield a U or J-shaped curve.
3. For progressive-attitude-toward-education items, the plotting will yield a U or J-shaped curve.

H-2 Hypothesis Derivation: From empirical findings reported by Suchman (1950) and others that such a relationship may be expected and should serve to establish a "0" point dividing the favorably-disposed from the unfavorably-disposed respondents (see Chapter 3).

H-2 Instrumentation: Following each attitude item, a separate question referring to the intensity with which a respondent held the opinion expressed on the content statement (Appendix B-1, 4).

Hypotheses Related to Contact
Frequency, Intensity and
Attitude Scores

H-3a: The more frequent the contact with disabled persons, the higher will be the scores on the intensity statements of the attitude-toward-disabled-persons (ATDP) scale, regardless of whether attitude content is favorable or unfavorable!

H-3a Hypothesis Derivation: From considerations of Rosenberg, Foa, and Guttman and Foa, to the effect that contact frequency is directly related to attitude intensity, regardless of content directions (see Chapter 2).

H-3a Instrumentation: Contact frequency, by a direct question, i.e. PQ-HP no. 4 (Appendix B-4); ATDP intensity scores obtained through independent intensity questions following each attitude content statement (Appendix B-4).

H-3b: The more frequent the contact with education, the higher will be the scores on the intensity statements of the Kerlinger Attitudes Toward Education scale, regardless of whether attitude is traditional or progressive.

H-3b Hypotheses Derivation: Same as H-3a above.

H-3b Instrumentation: Contact frequency, by a direct question, i.e. PQ no. 4 (Appendix B-1); education intensity scores obtained as in H-3 above (Appendix B-1).

H-4a: High frequency of contact with disabled persons will lead to favorable attitudes if high frequency is concurrent with (a) alternative rewarding opportunities, (b) enjoyment of the contact, and (c) ease of avoidance of contact.

H-4a Hypotheses Derivation: From considerations of Homan's, Zetterberg, and various studies in special education (see Chapter 2).

H-4a Instrumentation: Attitudes toward disabled persons, by a 20 statement attitude instrument developed by Yucker, et al. (1960) and modified for the purposes of the present study (Appendix B-4). Contact variable by direct questions in the PQ-HP: frequency by question no. 4, alternatives by no. 9, enjoyment by no. 8, and avoidance by no. 5.

H-4b: High frequency of contact with education will lead to favorable attitudes if high frequency is concurrent with (a) alternative rewarding opportunities, (b) enjoyment of the contact, and (c) ease of avoidance of contacts.

H-4b Hypothesis Derivation: Same as H-4a above.

H-4b Instrumentation: Attitudes toward education, by a 20 statement attitude instrument developed by Kerlinger (1959) and modified for the purposes of the present study. Contact variable

by direct questions in the PQ: frequency by question no. 4, alternatives by no. 7, and enjoyment by no. 6.

Hypothesis Related to
Attitude and Value Scores

H-5a: Persons who score high in need for power and control over others will tend to score low in acceptance of disabled persons.

H-5b: Persons who score high in need for power and control over others will tend to score low in progressive attitudes toward education and high in traditional attitudes toward education.

H-5a,b Hypothesis Derivation: From considerations of Wright in respect to asset vs comparative valuations of others (see Chapter 3), and of Rosenberg to the effect that the more the belief content of an attitude is instrumental to value maintenance, the more favorable will be the evaluation of the object of the attitude. Persons with high power needs are applying a comparative yardstick in evaluations of others and should be expected to devalue persons with disabilities as well as progressive attitudes toward education since the latter usually implies changes in the status quo. Some empirical findings of this appears in findings of Whiteman and Lockoff in respect to blindness (see Chapter 3) and Felty (1964).

H-6a,b Instrumentation: Need for power and control measured by the Leadership (L) scale of the Gordon Survey of Interpersonal Values (Appendix B-2); attitudes-toward-disabled-persons, as in H-4a, and attitudes toward education as in H-4b.

H-6a: Persons who score high in need for recognition and achievement will tend to score low in acceptance of disabled persons.

H-6b: Persons who score high in need for recognition and achievement will tend to score low in progressive attitudes toward education and high in traditional attitudes toward education.

H-6a,b Hypothesis Derivation: Same as H-5 above.

H-6a,b Instrumentation: Need for recognition and achievement measured by the Recognition (R) scale of the Gordon Survey of Interpersonal Values (Appendix B-2), attitudes toward disabled persons as in H-4a, and attitudes toward education as in H-4b.

H-7a: Persons who score high in need to help others, to be generous, will tend to score high in acceptance of disabled persons.

H-7b: Persons who score high in need to help other, to be generous, will tend to score high in progressive attitudes toward education and low in traditional attitudes toward education.

H-7c: Women will score higher than men in (a) the need to help others, (b) positive attitudes toward the disabled, and (c) progressive attitudes toward education.

H-7a,b,c Hypothesis Derivation: Same as H-6 above, but stated in terms of an asset-value orientation rather than a comparative-value orientation.

H-7a,b,c Instrumentation: Need to be helpful and generous measured by the Benevolence (B) scale of the Gordon scale of Interpersonal Values (Appendix B-2), attitudes-toward-disabled-persons as in H-4a and attitudes toward education as in H-4b.

Hypothesis Related to
Change Orientation and
Attitude Scores

H-8: Persons who score high on change orientation will score high on positive attitudes toward handicapped persons and progressive education and score low on traditional education.

H-8 Hypothesis Derivation: Same as H-5 above and extended to connote that high scores on change orientation represents departure from the status quo and high relationship to new ideas (i.e. progressivism) and care for the handicapped (i.e. concern for individual differences).

H-8 Instrumentation: Change orientation measured by questions 39-43, and 47 in the PQ. These questions deal with change in health practices, child rearing, birth control, automation, political leadership, and self change. Attitudes toward the handicapped measured as in H-4a and toward education as in H-4b.

Hypotheses Related to Characteristics
of Those Working Directly with
Disabled Persons (SER)

H-9a: Persons working directly with disabled persons (SER) will have a lower mean attitude-toward-disabled-persons score than will persons in other occupational categories.

H-9b: SER respondents from the United States will have a lower (i.e. more positive) mean attitude-toward-disabled-persons score than will persons from Colombia and Peru.

H-9 Hypothesis Derivation: From considerations of Zetterberg (see Chapter 3), to the effect that high frequency of contact is positively associated with favorableness of attitude if (a) the interaction could be easily avoided, and (b) there are other rewarding activities to engage in. The linkage of (a) and (b) with occupational categories rests on the assumption that a measure of choice and job alternatives was present in the selection of employment; i.e., that SER employees chose this occupation in preference to others. The assumption is extended to imply that

such linkage is greater in the United States and consequently the U.S. respondents should be more positive since they have more "occupational freedom".

H-9 Instrumentation: Attitudes toward disabled persons measured as in H-4a.

H-10: The SER group will have a higher mean score than will persons in other occupational categories in respect to the value of Benevolence and lower mean scores in respect to the values of Leadership and Recognition.

H-10 Hypothesis Derivation: Same as H-5 above and applied specifically to the SER group rather than to those who measure high on Benevolence (asset value) and low on Leadership (comparative value).

H-10 Instrumentation: Same as H-4 and 6 for Leadership and Benevolence values respectively.

H-11a: The SER group will have a higher mean score in progressive-attitudes-toward-education than will persons in other occupational categories.

H-11a,b Hypothesis Derivation: Same as H-5 and 6 and applied specifically to the SER group rather than to those who measure high on progressive attitudes and low on traditional-attitudes-toward-education.

H-11a,b Instrumentation: Same as H-7b above.

H-12: The SER group will have higher mean scores than will other occupational groups on the following change orientation measures: (a) health practices, (b) child rearing practices, (c) birth control practices, (d) automation, and (e) self change.

H-12 Hypothesis Derivation: Same as H-5a,b,c and extended to imply that persons who score high on progressive attitudes toward education will also score high on change orientation variables since both areas represent dissatisfaction with the status quo and emphasize the individual and empirical solutions to current problems.

H-12 Instrumentation: Change orientation measured by a series of questions in PQ on the areas stated in H-12 (Appendix B-3, see also pp. 83, 84.

H-13: The SER group will have higher mean scores than other groups on the amount of contact with Mentally Retarded or Emotionally Disturbed persons.

H-13 Hypothesis Derivation: The SER group was chosen for known "prolonged contact" with the physically handicapped. The current hypothesis postulates a generalization effect in that increased contact with one area of disability implies increased contact with other areas of disability or exceptionality.

H-13 Instrumentation: Contact frequency with the physically handicapped measured as in H-3a and contact frequency with the mentally retarded and with the emotionally disturbed measured by questions 10 and 11 in the PQ-HP.

Limitation of the Study

Although careful plans were made to ensure the collection of the intended sample, only three groups from Colombia and two groups from Peru of the planned four groups from each country are represented in the analysis. Because of this difficulty in Colombia and Peru, a sample of the SER group was analyzed from data collected in Wichita, Kansas (see page 74).

In Colombia the intended sample was received from all of the groups except the M group. While this omission is unfortunate, it must be viewed in light of the many frustrations, such as numerous schedule cancellations, that are somewhat inherent in data collection in Latin America.

A problem in collation arose in Colombia which unfortunately was not noticed until after the data had been collected. The last page of the education scale (questions 18, 19 and 20) was left off in a number of cases. This reflects, at least in a measure, the fact that clerical help has little or no experience with routine research procedures. Perhaps this omission is not as serious as

it first appears. In Felty's pilot study (1965) only item 20 of this triad, which was classified as a progressive item, scaled. Items 18 and 19 were classified as traditional items.

While the two groups from Peru (SER and M) represent entirely different segments in the society and allow meaningful and fruitful comparisons, the other groups would have permitted more freedom and certainty in terms of interpretations and generalizations.

Questions 43 thru 46 in the Personal Questionnaire proved to be too sensitive, in the opinion of the translator, to give in Peru. These questions relating to political leadership, federal and local aid to education, and educational planning were omitted.

It must be remembered that there is not a well established tradition for social science research in Latin America. Many of the respondents have never filled out a questionnaire. While it is difficult to assess how this factor effects the reliability and validity of the results, it would seem likely to have negative implications - particularly in a traditional society where "having the right answer" is very important.

While every effort was made to explain the purpose of the research project, it probably had little tangible meaning because it seemed so far removed from the experiences they had had. It

is also possible that the prestige factor may have colored the results. There may have been a tendency to identify with the American researcher by responding in ways that they would visualize as pleasing to him.

Particularly in the M group, the question arises whether or not this group was really representative of the manager/executive in Lima. The selection procedures for enrollment in the school may have been a factor. If the student body represented the "cream of the crop", response biases might be expected. It will also be remembered that they consisted largely of middle echelon government officials. While it is unquestioned that they will be performing executive functions, the question might be raised as to whether they are really representatives of Peruvian executives.

The length of time involved in filling out the questionnaire is most certainly a factor. It required an average of two hours to fill out the six questionnaires. In most cases this was done on the respondent's own time. If they were unable to grasp the relationship between filling out questionnaires and research objectives, there was a tendency to resent this effort. If valued activities had to be delayed and plans altered, resentment might be expected to result.

Felty (1965) discussed limitations in his study which resulted from a lack of concept equivalence. In other words, how

much is lost in the translation of the instruments into a different language and cultural setting? In an effort to solve this problem, Dr. John E. Jordan, the major advisor to this dissertation, went over the instruments with the translators from Colombia and Peru before translation in an effort to ensure as much accuracy as possible in concept equivalence. As a result, the instruments were separately translated into both Peruvian and Colombian Spanish.¹

However, time and money limitations did not permit the giving of these instruments to a pre-test group before administering them to the main sample. Inasmuch as this study can be considered a continuing exploratory study for the larger study currently under the supervision of Dr. John E. Jordan, this limitation will not be as imposing as it might first seem.

Under limitations of the testing of hypothesis may be considered such things as the reliability and validity of the measuring instruments and the adequacy of the sampling. Two approaches to reliability and validity were attempted: the analysis of reliability was restricted to those items appearing in instruments that were analyzed for scale properties. Reliability in this case becomes a function of the reproducibility of the scales. Accord-

¹ Dr. Jordan also made a similar trip to a number of countries in Europe. It was not necessary to eliminate any of the questions because of the inability to achieve concept equivalence.

ing to Guttman (1950, p. 278) for a reproducibility coefficient to acquire stability it is necessary to retest on a large sample of respondents, even though the pre-test may show a relatively high reproducibility coefficient.

Sampling bias again places limitations on the generality of the results, but has advantages for an exploratory project. Goode and Hatt (1952, p. 92) suggest that the cases in such a study be "chosen as strategically as possible, e.g., extreme cases, sets of cases which seem contradictory, 'ideal' cases, etc.," in order to determine which variables are of the greatest importance and to develop some concepts of the variance of the population. They further suggest the use of hypotheses "to see whether they seem to fit the situation" (op. cit., p. 92). The samples in this study were chosen to represent "ideal" groups and the major concern was with obtaining a large enough representation within each group for statistical analysis, rather than with population representation in a national sense. Although this would impose a severe limitation on a study purporting to be "nationally representative", it appears fairly adequate for an exploratory study such as the present one.

CHAPTER IV

ANALYSIS OF THE DATA

The analysis of the data is organized into two main sections:

section 1, descriptive data on designated characteristics of the sample;

section 2, the testing of the hypotheses presented at the end of Chapter III and comparisons of mean differences of various scores when the respondents are divided according to (a) sex, (b) interest group (occupational) categories, (c) contact with criterion, and (d) related indices. Correlational relationships (zero-order, multiple and partial) will also be presented for selected variables of the study.

Section 1: Descriptive Data

In this section the descriptive characteristics of the sample are presented. The data is derived from a combination of the FCC I and II programs (see p. 86) and the CDC 3600 MDSTAT program which provides a number of statistics (see pp. 90, 91) useful for simple demographic description.

Tables 1 and 2 present the two major sub-divisions of the total sample: sex and interest (occupational) groups. Inspection of the tables will reveal two major factors which later lead to difficulties in interpretation of the statistical data: the small number in various sub-samples and the sex-linked character

of some of the occupational groups. For those variables or hypotheses in which sex differences are obtained, the sex composition of the interest group would be an important factor in the analysis of the interest group differences. The converse would, of course, also be true since the respondents are the same in each case, but only classified differently.

TABLE 1.--Distribution of respondents according to sex and interest group from Colombia, Peru, and Kansas.¹

	Interest Group ²									
Sex	SER			E		L		M		Total
	Col	Peru	Kan	Col	Peru	Col	Peru	Col	Peru	
Male	20	26	22	28	--	46	--	--	85	227
Female	47	12	81	100	--	--	--	--	10	250
Total	67	38	103	128	--	46	--	--	95	477

¹ In some instances the N's do not agree exactly between Tables 1, 2 and the tables containing the statistical material in Appendix A. This is due to problems of missing data and minor differences in classifications.

² SER = Spec. Educ. Rehab.
L = Labor

E = Education
M = Manager/Executive

TABLE 2.--Occupational composition of total sample by sex and interest group for Peru¹, Colombia, and Kansas.

Occupation		Frequency by Respondent Groups ² and Specific Occupation										
Code	Description	SER		E	L	M	Male		Female		Country Total	
		Co	Peru				Co	Peru	Co	Peru		
(01-09, SER)												
1	Adm. persons	3	3	2			4	1	2	1	5	3
2	Teachers	6	84	5			3	11	8	73	11	84
3	School sp. services	1	2	13				6	1	2	1	2
4	Univ. teachers	8	1	3			3	4	5	1	8	4
5	Medical	14	4				9	4	5		14	4
6	Psy.-soc. work	7	1				1	1	6		7	1
7	Para medical	15	12	1			3	10	12	1	15	1
8	Unskilled	7	3				1	2	6	1	7	3
9	Other	1	5					4	1	1	1	5
(10-19, Educators other than SER)												
10	Elem. teachers		1	86			21		65	1	86	1
11	Sec. teachers			21			2	2	19	1	21	2
12	Guidance		1									
13	Spec. services											
14	Adm. personnel			11							11	10
15	Univ. teachers					5						5
16	Open					1						1

Occupation		Frequency by Respondent Groups ² and Specific Occupation						
		SER	E	L	M	Male	Female	Country Total
Code	Description	ColPeruKan	ColPeruKan	ColPeruKan	ColPeruKan	ColPeruKan	ColPeruKan	ColPeruKan
(30-39, Prof. and Teachers other than previous page)								
30	Engineer				19	17	2	19
31	Lawyers				5	5		5
35	Researchers				3	3		3
36	Social workers				1	1		1
37	Other				1	1		1
38	Other							
39	Other				2	2		2
(40-49, Business and Industry)								
40	Gov. officials				26	19	7	26
41	Mfg. exec's				2	2		2
49	Open			1		1		1
(50-59, White Collar workers)								
50	Clerical	1			2		1	3
(60-69, Blue Collar workers)								
63	Mechanics			46				46
64	Shoemakers	3						3
65	Sailors (non mil.)							

TABLE 2.--(cont.) Occupational composition of total sample by sex and interest group for Peru¹, Colombia, and Kansas.

Occupation		Frequency by Respondent Groups ² and Specific Occupation									
Code	Description	SER		E	L	M	Male		Female		Country Total
		Col	Peru				Col	Peru	Col	Peru	
(60-69, cont., Blue Collar workers)											
66	Cab drivers										
67	Operators	1				1			1		2

¹ Although the teacher sample and the labor sample per se were not gathered in time for this study, a few (N - 15) respondents at ESAN were teachers who were there for advanced administrative training. On the other hand, a few laborers (N - 7) were members of the rehabilitation organization known as the Patranota. This accounts for the teacher sample and the laborer sample in the Peruvian analysis section.

² SER = Spec. Educ. Rehab. E = Education L = Labor M = Manager/Executive

Differences in Mean Education, Income, and Age
Scores Between Interest Groups, Male, and Female
Respondents for Colombia, Peru, and Kansas

Tables 3-7 present the data from the Colombian sample for education, income, and age by sex and interest group. Tables 8, 11 present the data for the same variables from Peru and Tables 9, 10 (Appendix A) the Duncan's tables. Table 12 presents the comparative data on these same variables from the SER Group from Colombia, Peru, and Kansas. The Duncan's analyses of Table 12 are in Appendix A; Tables 13 and 14. The Duncan's New Multiple Range Test¹ is used to analyze the variance between three or more means in those cases where the F statistic indicated that a significant difference existed between means.

Tables 4-6 present the Duncan's analysis for the data on education, income, and age in Table 3. Throughout the remainder of the dissertation the Duncan's tables will be located in Appendix A. Discussion of the Duncan's analyses will be contained in both Chapter IV and V and the reader may refer to Appendix A for the specific data.

Since the data for education and income were analyzed in coded form an interpretation of the coding is necessary; see Table 16 for the education code and the Colombian and Peruvian Special Instructions Code Book for income codes for Colombia and

¹ See p. 88 for discussion of the Duncan's Multiple Range Test.

Peru (Appendix C-4 and 5). The data is presented such that each score represents a range; i.e., grades completed or amount of income. In education the ranges are also uneven, which makes interpretation somewhat more difficult. However, the data is at least ordinal in that a higher score always represents a higher number of grades completed or amount of income earned.

TABLE 3.--Comparison of mean differences, standard deviations, and F statistics in respect to three demographic variables for three occupational categories in Colombia.

Variable	Occupation ¹	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Education	SER	67	5.58	1.437	83.7238	0.005+
	E	122	4.56	1.136		
	L	46	2.72	0.655		
	TOTAL	235	4.49	1.514		
	Ranking of Means: SER (5.58)> E (4.56)> L (2.72)					
Income	SER	60	21.72	23.755	4.119	0.02
	E	122	17.32	7.716		
	L	34	12.35	17.496		
	TOTAL	216	17.76	15.635		
	Ranking of Means: SER (21.72)> E (17.32)> L (12.35)					
Age	SER	65	29.17	7.528	44.901	0.005+
	E	120	31.33	9.377		
	L	42	17.91	1.462		
	TOTAL	227	28.23	9.337		
	Ranking of Means: E (31.33)> SER (29.17)> L (17.19)					

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

TABLE 4.--Duncan's New Multiple Range Test applied to means of education scores for three occupational categories in Colombia.

Range of Mean (p)	2	3	d.f. 234
Studentized ranges for 5% test (z_p) ¹	2.77	2.92	
R'_p ($RI \text{ } sz_{p234}$) ²	3.16	3.39	
Mean Differences ³			
$\bar{X}_R^4 - \bar{X}_L$ (p3)		21.11*	
$\bar{X}_R - \bar{X}_E$ (p2)	9.37*		
$\bar{X}_E - \bar{X}_L$ (p2)	14.90*		

¹ Taken from Edwards (1960, p. 373).

² The square root mean square of the analysis of variance of Table 3

$$s = \sqrt{1.344} = 1.16$$

p the range of means (2 and 3)

³ Mean differences of columns 2 and 3 have been transformed into the equivalent of t-scores for multiple means. To be significant, the figure must exceed the R'_p value of the same column. The formula given by Kramer (1956) is:

$$(X_Y - X_Z) \sqrt{\frac{2n_Y n_Z}{n_Y + n_Z}} > sz_p, \text{ error d.f. of A. of V.} \\ (z R'_p)$$

⁴ In all Duncan tables the subscript R will be used for the SER group due to space limitations.

* This level of confidence will be used on all Duncan's Multiple Range Tests. $P < .05$.

TABLE 5.--Duncan's New Multiple Range Test¹ applied to means of income scores for three occupational groups in Colombia.

Range of Mean (p)	2	3	d.f. 215
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'p (RI sz _{p215})	42.69	45.00	
Mean Differences			
$\bar{X}_R - \bar{X}_L$ (p3)		61.75*	
$\bar{X}_R - \bar{X}_E$ (p2)	38.85		
$\bar{X}_E - \bar{X}_L$ (p2)	36.69		

¹ See Table 4, p. 115 for full explanation.

* $P < .05$.

$$s = \sqrt{237.65} = 15.41$$

TABLE 6.--Duncan's New Multiple Range Test¹ applied to means of age scores for three occupational categories in Colombia.

Range of Mean (p)	2	3	d.f. 226
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'p (RI sz _{p226})	20.06	23.24	
Mean Differences			
$\bar{X}_E - \bar{X}_L$ (p3)		78.90*	
$\bar{X}_E - \bar{X}_R$ (p2)	19.38		
$\bar{X}_R - \bar{X}_L$ (p2)	85.54*		

¹ See Table 4, p. 115 for full explanation.

* $P < .05$.

$$s = \sqrt{63.3} = 7.96$$

TABLE 7.--Comparison of mean differences, standard deviations, and F statistic in respect to three demographic variables as they relate to male and female sex in Colombia.

Variable	N	Sex	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Education	81	Male	3.864	1.641	3.233	0.09
	131	Female	4.466	2.718		
	212	Total	4.236	2.379		
				d.f. between	1	
				within	211	
				total	211	
Income	81	Male	16.716	19.907	0.5351	0.47
	137	Female	18.314	12.355		
	218	Total	17.720	15.568		
				d.f. between	1	
				within	216	
				total	217	
Age	90	Male	24.256	8.086	31.620	0.005+
	139	Female	30.986	9.303		
	229	Total	28.341	9.421		
				d.f. between	1	
				within	227	
				total	228	

TABLE 8.--Comparison of mean differences, standard deviations, and F statistics in respect to three demographic variables for four occupational categories in Peru.

Variable	Occupation	N	Mean	Standard Deviation	F	Sig. of F
Education	SER	31	5.03	1.87	9.99	0.005+
	E	17	5.88	1.45		
	M	63	6.08	1.17		
	L	9	3.56	1.67		
	TOTAL	120	5.59	1.61		
Ranking of Means: M (6.08) > E (5.88) > SER (5.03) > L (3.56)						
Income	SER	31	9.97	12.18	2.44	0.07
	E	17	11.00	8.27		
	M	57	18.14	21.19		
	L	9	7.00	7.76		
	TOTAL	114	13.97	17.15		
Ranking of Means: M (18.14) > E (11.00) > SER (9.97) > L (7.00)						
Age	SER	30	26.23	6.98	3.33	0.02
	E	14	31.64	9.09		
	M	59	31.09	7.20		
	L	8	30.13	4.61		
	TOTAL	111	29.78	7.49		
Ranking of Means: E (31.64) > M (31.09) > L (30.13) > SER (26.23)						

TABLE 11.--Comparison of mean differences, standard deviations, and F statistics in respect to three demographic variables for males and females in Peru.

Variable	Sex	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Education	Male	110	5.67	1.61	0.07	0.78
	Female	22	5.77	1.41		
	Total	132	5.69	1.57		
			d.f. between	1		
			within	130		
			total	131		
Income	Male	106	12.95	17.22	0.13	0.71
	Female	20	14.50	18.12		
	Total	126	13.20	17.30		
			d.f. between	1		
			within	124		
			total	125		
Age	Male	105	30.08	7.71	3.20	0.10
	Female	19	26.79	6.05		
	Total	124	29.57	7.55		
			d.f. between	1		
			within	122		
			total	123		

TABLE 12.--Comparison of mean differences, standard deviations, and F statistics in respect to education and age for respondents working in the area of SER in Colombia, Peru, and Kansas.¹

Variable	Country	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Education	Colombia	67	5.58	1.44	32.84	0.005+
	Peru	31	5.03	1.87		
	Kansas	103	6.84	0.92		
	Total	201	6.14	1.48		
Ranking of Means: K (6.84) > C (5.58) > P (5.03)						
Age	Colombia	65	29.17	7.53	18.33	0.005+
	Peru	30	26.23	6.98		
	Kansas	103	36.71	12.02		
	Total	198	32.65	10.92		
Ranking of Means: K (36.71) > C (29.17) > : (26.23)						

¹ Money systems were not directly comparable between countries due to the coding form used. Thus no comparison were made.

TABLE 15.--Comparison of mean differences, standard deviations, and F statistics in respect to three demographic variables for males and females in Kansas.

Variable	Sex	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Education	Male	22	7.36	0.66	10.08	0.005+
	Female	81	6.69	0.93		
	Total	103	6.83	0.92		
				d.f. between	1	
				within	101	
				total	102	

Income	Male	21	9.19	3.14	0.005	0.90
	Female	80	9.26	4.19		
	Total					
				d.f. between	1	
				within	99	
				total	100	

Age	Male	22	30.23	5.90	8.75	0.005+
	Female	81	38.47	12.67		
	Total	101	36.71	12.02		
				d.f. between	1	
				within	101	
				total	102	

TABLE 16.--Interpretation of education scores in terms of actual educational attainment.

Score	Interpretation	Range of Interval
1	Less than 4 years completed	0 - 3 inclusive
2	From 4 to 6 years completed	4 - 6 inclusive
3	From 7 to 9 years completed	7 - 9 inclusive
4	From 10 to 11 years completed	10 - 11 inclusive
5	Some college or university	12 - 15 inclusive
6	College or university degree	16 -
7	Post-degree study	- - -
8	Advanced degree	- - -

Summary of Descriptive
Data in Tables 3-16

The results of these tables must be interpreted with caution, partly for reasons already considered in respect to sampling and test administration, but primarily because of problems encountered in testing interaction between sex and occupation. The occupational categories are unequal, and sex distribution within categories is unequal. The testing of interaction effects with unequal replications in each cell is not only a questionable statistical procedure, but in this case would be impossible because of the sex-linked character of some of the occupational categories. This is indicated in Tables 1 and 2.

For those variables in which sex differences are obtained, the sex composition of the interest groups would be an important

factor in the analysis of group differences. The converse would, of course, also hold, since the respondents are the same in each case, but only classified differently. Thus in a given case where both occupational and sex classifications show significant F values, it may not be possible to determine whether the differences occur independently, or are obtained for the other classifications because of the interaction involved. It will be noted from the tables that the actual significance levels of the F values are printed out rather than indicating if they are significant at a stated level, i.e., .01 or .05. Since the computer program now provides this information it was decided to present the actual significance values to enable the reader to make his own judgment when the level "just-makes" or "just-does-not-make" a previously stated acceptable level of statistical significance.

Colombia: Tables 3-7 indicate that the SER group has a higher education than do the other groups in Colombia and is of a slightly higher economic level. The women, which comprise the bulk of the sample (147 women and 94 men) are older than men; have an income that is slightly higher than men; and have a better education. It must be remembered, however, that one half of the male sample comes from the labor group which is low income/low education in nature.

Peru: Tables 8-11 indicate that the M group has a higher education and have higher incomes than do the respondents from other groups in Peru. The female respondents in Peru apparently do not contribute significantly to the differences of the means. The SER group is significantly younger than the other groups. This may, in part, be accounted for by the fact that the respondents in the SER group are often volunteers serving without financial reimbursement.

Country Comparisons: Table 15 indicates that the Kansas sample is primarily composed of female respondents who are older than their male counterparts and have less formal education. Table 12 indicates that the Kansas sample has more formal education, with less variance, than do respondents from Colombia and Peru and are significantly older than are their South American counterparts.

Section 2: Hypotheses Testing, Mean Differences, and Correlational Analyses

H-1: Each set of attitude items employed in the study (Appendix B-1, 4) represents an underlying unidimensional universe of content, so that Guttman scale analysis will yield a scale or quasi-scale of attitude items.

None of the attitude items on education or disability formed a meaningful scale in the Guttman sense. This hypothesis relating to an underlying unidimensional universe of content is not supported for these items. It is recommended that these items be analyzed by Lingoes' (1965) Multidimensional Scalogram Analysis - I in future research efforts. This program, according to Lingoes, not only permits multi-unidimensional analysis but multidimensional analysis as well. Lingoes gives the following description of the program:

Although computer techniques have been developed for scalogram analysis (Schutz, 1961) and for extending Guttman's (1944) pioneering and popular scaling method to the determination of multiple unidimensional scales (Lingoes, 1960, 1962; 1963a), neither method is adapted for analyzing n-chotomous data nor for directly revealing multidimensional interrelationships. The present program, G-L (MSA - I), is, however, ideally suited for solving the general grouping problem of systematics, on the other hand, and for revealing the scale properties of items, on the other hand, based on a minimum number of assumptions. This program can handle quantitative and/or qualitative data, monotone and/or polytone items, with up to 20 categories, and permits one to test not only unidimensional hypothesis, but multidimensional ones as well (Lingoes, 1965).

This program is scheduled to become operational in the spring of 1966 in the Michigan State University computer center.

H-2: For each attitude scale the plotting of intensity scores against content scores will yield a U-shaped or J-shaped curve.

The scaling of intensity scores has meaning only if the items have previously scaled for content. Since the content items did not scale, intensity analysis was omitted.

H-3a: The more frequent the contact with disabled persons, the higher will be the scores on the intensity statements of the attitude-toward-disabled-persons (ATDP) scale, regardless of whether attitude content is favorable or unfavorable.

Colombia

Table 17 reveals that high frequency of contact with disabled persons did not produce significantly higher intensity scores on the ATDP scale than did lower frequencies of contact with disabled persons. Approximately 25 percent of the Colombian sample who had the highest intensity scores were compared with approximately 25 percent of the same sample who had the lowest intensity scores on the ATDP scale. H-3a cannot be considered confirmed for Colombia.

TABLE 17.--Means, standard deviations, and F statistic comparing high and low frequency of contact with disabled persons with intensity scores on the ATDP scale in Colombia.

Variable	N	Mean of ATDP Intensity Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High frequency of contact	49	69.45	7.53	.83	.37
Low frequency of contact	53	68.07	7.65		
Total	102	68.73	7.59		
			d.f. between	1	
			within	100	
			total	101	

H-3b: The more frequent the contact with education, the higher will be the scores on the intensity statements of the Kerlinger Attitudes Toward Education Scale, regardless of whether attitude is traditional or progressive.

H-3b cannot be considered supported. The F statistic, Table 18 and 19, indicate that the mean differences between persons with high and low contact with education, are not significantly different on either progressive or traditional intensity scores. Contrary to the hypothesis, the mean of the low contact group is actually higher than the high contact group on the progressive-attitude-toward-education measure.

TABLE 18.--Means, standard deviations, and F statistic comparing high and low frequency of contact with education with intensity scores on the progressive-attitude-toward-education scale for Colombia.

Variable	N	Mean of Progressive Intensity Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High frequency of contact	51	36.92	2.62	.31	.58
Low frequency of contact	47	37.23	2.89		
Total	97	37.07	2.74		
			d.f. between	1	
			within	95	
			total	96	

TABLE 19.--Means, standard deviations, and F statistic comparing high and low frequency of contact with education with intensity scores on the traditional-attitude-toward-education scale for Colombia.

Variable	N	Mean of Traditional Intensity Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High frequency of contact	54	35.94	3.56	.84	.36
Low frequency of contact	48	36.60	3.68		
Total	102	36.25	3.61		
			d.f. between	1	
			within	100	
			total	101	

Table 20 presents the zero-order correlations between contact scores and intensity scores on the ATDP scale and the correlations between contact scores and intensity scores for both progressive-attitude-toward-education scores and traditional-attitude-toward-education scores for the occupational groups of the Colombian sample. The correlations for males and females within each group are also given.

TABLE 20.--Zero-order correlations between content and intensity scores on the attitude scales for the occupational groups in Colombia.

Education Scale						
ATDP ¹ Scale	r	N	Progressive		Traditional	
			r	N	r	N
<u>SER group</u>						
Male	-.115	20	.483*	18	.272	18
Female	.066	41	.509***	40	-.181	39
Total	.007	61	.495***	58	-.086	57

<u>E group</u>						
Male	-.170	23	.165	26	.131	26
Female	-.055	87	.383**	89	.196*	90
Total	-.076	110	.336**	115	.184*	116

<u>L group</u>						
Male	.373**	41	.091	34	.561**	35

¹ Low scores on ATDP indicate positive attitudes

* < .05

** < .01

*** < .005

Table 20 suggests there was no significant correlation between the content and intensity scores of the ATDP scale for the SER group and E group in Colombia. There was a significant relationship, however, between the content and intensity statement of the ATDP scale for the L group.

On the other hand, there were significant relationships in Colombia between the content and intensity statements on the progressive-attitude-toward-education scale for the SER and the E group. The relationship between content and intensity scores were also evident on the traditional-attitude-toward-education scale for both the E group and the L group.

H-3a: The more frequent the contact with disabled persons, the higher will be the scores on the intensity statements of the attitude-toward-disabled-persons (ATDP) scale, regardless of whether attitude content is favorable or unfavorable.

Peru

Table 21 indicates that high frequency of contact with disabled persons did not result in significantly higher intensity scores on the ATDP scale than did lower frequencies of contact with disabled persons. H-3a is not supported for the Peruvian sample.

TABLE 21.--Means, standard deviations, and F statistic comparing high and low frequency of contact with disabled persons with intensity scores on the ATDP scale in Peru.

Variable	N	Mean of ATDP Intensity Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High frequency of contact	21	59.38	13.31	1.50	.23
Low frequency of contact	28	63.21	8.59		
Total	49	61.57	10.91		
			d.f. between	1	
			within	47	
			total	48	

H-3b: The more frequent the contact with education, the higher will be the scores on the intensity statements of the Kerlinger Attitudes Toward Education scale, regardless of whether attitude is traditional or progressive.

Table 22 and 23 indicate that the intensity scores are not significantly different between persons with high and low contact with education on both the progressive and traditional subscales of Kerlinger's attitude scale toward education. H-3b is not supported for the Peruvian sample.

TABLE 22.--Means, standard deviations, and F statistic comparing high and low frequency of contact with education with intensity scores on the progressive-attitude-toward-education scale for Peru.

Variable	N	Mean of Progressive Intensity Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High frequency of contact	22	32.73	3.22	.05	.80
Low frequency of contact	22	32.95	3.27		
Total	44	32.84	3.21		
			d.f. between	1	
			within	42	
			total	43	

TABLE 23.--Means, standard deviations, and F statistic comparing high and low frequency of contact with education with intensity scores on the traditional-attitude-toward-education scale for Peru.

Variable	N	Mean of Traditional Intensity Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High frequency of contact	22	31.82	3.27	1.33	.25
Low frequency of contact	22	33.04	3.76		
Total	44	32.43	3.54		
			d.f. between	1	
			within	42	
			total	43	

TABLE 24.--Zero-order correlations between content and intensity scores on the attitude scales for the occupational groups in Peru.

	ATDP Scale		Education Scale			
			Progressive		Traditional	
	r	N	r	N	r	N
<u>SER group¹</u>						
Male	.328	22	.402*	22	.269	22
Female	-.355	7	.077	8	.497	8
Total	.198	28	.313*	31	.368*	30
<u>M group²</u>						
Male	-.135	54	.092	54	.256*	54
Female	-.183	9	-.336	9	.468	9
Total	-.148	63	.014	63	.257*	63

¹ SER = Spec. Educ. and Rehab.

² M - Manager/Executive

* < .05

Table 24 indicates no significant relationship between content and intensity scores for the ATDP scale on the Peruvian sample.

A significant positive relationship, however, was observed on the progressive-attitude-toward-education measure on the SER male and total groups in Peru. Significant positive correlations were also noted for the traditional-attitude-toward-education scale for both the total SER group and the male and total M group in Peru.

H-4a: High frequency of contact with disabled persons will lead to favorable attitudes if high frequency is concurrent with (a) alternative rewarding opportunities, (b) enjoyment of the contact, and (c) ease of avoidance of contact.

Colombia

As indicated by Table 25, the multiple correlation relating to the combined contact variables and favorableness of attitudes toward handicapped persons is significant at the .01 level of confidence.

As seen from Table 26, ease of avoidance when partialled out contributes most toward predicting attitudes toward handicapped persons. H-4a is considered confirmed for Colombia.

Peru

The finding in Peru was essentially the same as the finding in Colombia in terms of the relationship between the combined contact variables and favorable attitudes toward handicapped persons. The multiple correlation (Table 25) was significant at the .01 level of confidence. Ease of avoidance when partialled out contributes the most to the multiple correlation. While not significant, enjoyment of contact and alternative rewarding opportunities (Table 26) contributed more to the correlation than did amount of contact per se. H-4a is considered confirmed for Peru.

H-4b: High frequency of contact with education, both progressive and traditional, will lead to favorable attitudes if high frequency is concurrent with (a) alternative rewarding opportunities, and (b) enjoyment of the contact.

Colombia - progressive attitudes toward education:

The multiple correlation (Table 25) indicates that the correlation between progressive educational attitudes and the combined contact variable is significant at the .01 level. When partialled out, enjoyment of contact contributes more to the multiple correlation than does amount of contact per se or alternative reward opportunities (Table 26). H-4b is considered confirmed for Colombia as far as progressive educational attitudes are concerned.

Colombia - traditional attitudes toward education:

Table 25 indicates there was no significant correlation between the combined contact variables and traditional attitudes toward education. H-4b is not supported for the Colombia sample as far as traditional attitudes toward education are concerned.

Peru - progressive attitudes toward education:

Table 25 indicates that the multiple correlation between progressive educational attitudes and the combined content variable is statistically significant at the .05 level. Enjoyment of contact, when partialled out, contributed significantly to this correlation (Table 26). H-4b is supported for Peru as far as progressive attitudes toward education are concerned.

Peru - traditional attitudes toward education:

Table 25 indicates there was no significant multiple correlation between the combined contact variable and traditional attitudes toward education. H-4b is not supported for Colombia as far as traditional attitudes toward education are concerned.

TABLE 25.--Multiple correlations for combined contact variables with attitudes toward disabled persons and toward education (progressive and traditional) in Colombia and Peru.

Variable	Colombia N = 241	Peru N - 135
H.P. attitude and combined contact variables	.25**	.31**
Traditional Ed. attitude and combined contact variables	.09	.08
Progressive Ed. attitude and combined contact variables	.20**	.20*

* $p < .05$

** $p < .01$

TABLE 26.--Partial correlations between attitude-toward-handicapped-persons and attitudes toward education (both progressive and traditional) as related to contact variables, for Colombia and Peru.

Handicapped Persons Scale (dependent)	Colombia N = 241	Peru N = 135
Amount of contact	-.07	.02
Avoidance of contact	-.18*	-.22*
Enjoyment of contact	-.08	-.13
Alternatives to contact	-.06	-.13

Progressive-attitudes-toward-education (dependent)		
Amount of contact	.05	.05
Enjoyment of contact	.14	.17*
Alternatives to contact	.07	-.04

Traditional-attitudes-toward-education (dependent)		
Amount of contact	.03	.04
Enjoyment of contact	.06	.03
Alternatives to contact	-.07	-.06

* $p < .05$

H-5a: Persons who score high in need for power and control over others will tend to score low in acceptance of disabled persons.

Colombia

The results indicated in Table 27 do not support the above hypothesis. There were no significant differences between high and low scores on Leadership value and attitude toward disabled persons in Colombia.

TABLE 27.--Means, standard deviations, and F statistic comparing high and low scores on Leadership value and attitudes-toward-disabled persons scores in Colombia.

Variable	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Leadership value	54	49.98	7.80	.02	.86
Low scores on Leadership value	55	50.18	7.66		
Total	109	50.08	7.70		
			d.f. between	1	
			within	107	
			total	108	

H-5b: Persons who score high in need for power and control over others will tend to score low in progressive attitudes toward education and high in traditional attitudes toward education.

As indicated by Tables 28 and 29, there were no significant differences between persons with high scores on Leadership value and persons with low scores on Leadership value as far as the progressive-attitude-toward-education scores or traditional-attitudes-toward-education scores were concerned. H-5b is not confirmed for the Colombian sample.

TABLE 28.--Means, standard deviations, and F statistic comparing high and low scores on Leadership value and progressive-attitude-toward-education scores for Colombia.

Variable	N	Mean of Progressive Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High Leadership value scores	54	30.67	4.02	.83	.37
Low Leadership value scores	50	29.96	3.88		
Total	104	30.33	3.95		
				d.f. between	1
				within	102
				total	103

TABLE 29.--Means, standard deviations, and F statistic comparing high and low scores on Leadership value and traditional-attitude-toward-education scores for Colombia.

Variable	N	Mean of Traditional Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High Leadership value scores	53	28.70	4.25	.13	.72
Low Leadership value scores	52	29.98	3.86		
Total	105	28.84	4.05		
			d.f. between	1	
			within	103	
			total	104	

H-5a: Persons who score high in need for power and control over others will tend to score low in acceptance of disabled persons.

Peru

Table 30 indicates that differences do exist, although not significant, between means of those who score high and those who score low on Leadership value when compared with scores on the ATDP scale. H-5a is not considered confirmed for the Peruvian sample.

TABLE 30.--Means, standard deviations, and F statistic comparing high and low scores on Leadership value and attitudes-toward-handicapped-persons in Peru.

Variable	N	Mean of ATDP Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High Leadership value scores	24	50.87	6.69	3.23	.09
Low Leadership value scores	23	47.83	4.73		
Total	47	49.38	5.95		

H-5b: Persons who score high in need for power and control over others will tend to score low in progressive attitudes toward education and high on traditional attitudes toward education.

Tables 31 and 32 indicate that in Peru, significant differences do exist between the means of those who scored high and those who scored low on Leadership value on both the progressive-attitude-toward-education scale and the traditional-attitude-toward-education scale. Those who scored high on Leadership value had significantly higher means on both of Kerlinger's sub-scales. H-5b, then, is supported in as much as those who scored high on Leadership value also scored high on traditional attitudes toward education. However, it is not supported in the sense that those

who scored high on Leadership also scored high on the progressive-attitude-toward-education scale.

It might be postulated that the Peruvian sample has not clearly articulated the theoretical differences existing between the values represented by progressive and traditional-attitudes-toward-education.

TABLE 31.--Means, standard deviations, and F statistic comparing high and low scores on Leadership value and progressive-attitude-toward-education scores in Peru.

Variable	N	Mean of Progressive Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High Leadership value scores	24	30.75	3.65	4.83	.04
Low Leadership value scores	23	28.35	3.84		
Total	47	29.57	3.90		
			d.f. between	1	
			within	45	
			total	46	

TABLE 32.--Means, standard deviations, and F statistic comparing high and low scores on Leadership value and traditional-attitude-toward-education scores in Peru.

Variable	N	Mean of Traditional Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High Leadership value scores	24	31.17	4.26	4.45	.04
Low Leadership value scores	23	28.87	3.07		
Total	47	30.04	3.87		
			d.f. between	1	
			within	45	
			total	46	

H-6a: Persons who score high in need for recognition and achievement will tend to score low in acceptance of disabled persons.

Colombia

Table 33 indicates that persons who scored high on Recognition value did indeed score significantly lower in acceptance of disabled persons (as measured by the ATDP scale) than did those who had lower scores on Recognition value. H-6a is considered confirmed.

TABLE 33.--Means, standard deviations, and F statistic comparing high and low scores on Recognition value and score on the attitude-toward-handicapped-person-scale in Colombia.

Variable	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Recognition value	53	48.91	7.92	8.89	.005
Low scores on Recognition value	55	53.33	7.49		
Total	108	51.16	7.98		
			d.f. between	1	
			within	106	
			total	107	

H-6b: Persons who score high in need for recognition and achievement will tend to score low in progressive attitudes toward education and high in traditional attitudes toward education.

As indicated by Tables 34 and 35, there were no significant differences between persons who scored high and those who scored low on Recognition value compared with either progressive attitudes or traditional-attitudes-toward-education. H-6b is not confirmed for the Colombian sample.

TABLE 34.--Means, standard deviations, and F statistic comparing high and low scores on Recognition value and scores on the progressive-attitude-toward-education scale for Colombia.

Variable	N	Means	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Recognition value	54	31.46	3.91	.99	.32
Low scores on Recognition value	57	30.72	3.95		
Total	111	31.08	3.93		
			d.f. between	1	
			within	109	
			total	110	

TABLE 35.--Means, standard deviations, and F statistic comparing high and low scores on Recognition value and scores on the traditional-attitude-toward-education scale for Colombia.

Variable	N	Means	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Recognition value	58	29.31	3.59	.47	.50
Low scores on Recognition value	56	28.84	3.72		
Total	114	29.08	3.65		
			d.f. between	1	
			within	112	
			total	113	

H-6a: Persons who score high in need for recognition and achievement will tend to score low in acceptance of disabled persons.

Peru

The data presented in Table 36 suggests there are no significant mean differences between those who scored high and those who scored low on Recognition value when compared with expressed attitudes toward disabled persons. H-6a is not confirmed for the Peruvian sample.

TABLE 36.--Means, standard deviations, and F statistic comparing high and low scores on Recognition value and scores on the ATDP scale for Peru.

Variable	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Recognition value	27	48.33	5.76	.57	.46
Low scores on Recognition value	23	49.48	4.76		
Total	50	48.86	5.30		
			d.f. between	1	
			within	48	
			total	49	

H-6b: Persons who score high in need for recognition and achievement will tend to score low in progressive attitudes toward education and high in traditional attitudes toward education.

As indicated by Tables 37 and 38, there were no significant differences between persons who scored high and those who scored low on Recognition value compared with either progressive attitude or traditional-attitudes-toward-education. H-6b is not supported for the Peruvian sample.

TABLE 37.--Means, standard deviations, and F statistic comparing high and low scores on Recognition vlaue and scores on progressive-attitude-toward-education scale for Peru.

Variable	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Recognition value	27	30.78	3.93	.73	.40
Low scores on Recognition value	22	29.86	3.47		
Total	49	30.37	3.72		
			d.f. between	1	
			within	47	
			total	48	

TABLE 38.--Means, standard deviations, and F statistic comparing high and low scores on Recognition value and scores on the traditional-attitude-toward-education scale for Peru.

Variable	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Recognition value	27	30.70	3.12	1.15	.29
Low scores on Recognition value	22	29.50	4.66		
Total	49	30.16	3.91		
			d.f. between	1	
			within	47	
			total	48	

H-7a: Persons who score high in need to help others, to be generous, will tend to score high in acceptance of disabled persons.

Colombia

Table 39 reveals there were no significant differences between the means of those who scored high and those who scored low on Benevolence value when compared with scores on the ATDP scale. This finding, however, has very limited interpretability because of the limited number of respondents who scored high on Benevolence value. Approximately the same number of respondents were originally included in the high and low scoring categories

on Benevolence value. However, a number of the high scoring respondents on Benevolence were omitted from the data analysis because of a "missing data" factor in the computer program. This problem also applied to Tables 40 and 41 for H-7b on the Colombian sample. Because of these problems, no interpretation will be attempted for H-7b for either Colombia or Peru.

TABLE 39.--Means, standard deviations, and F statistic comparing high and low scores on Benevolence value and scores on the ATDP scale for Colombia.

Variable	N	Mean of ATDP Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Benevolence value	7	49.14	4.06	.04	.82
Low scores on Benevolence value	36	49.89	9.25		
Total	43	49.77	8.59		
		d.f. between	1		
		within	41		
		total	42		

H-7b: Persons who score high in need to help others, to be generous, will tend to score high in progressive attitudes toward education and low in traditional attitudes toward education.

See comments under H-7a above.

TABLE 40.--Means, standard deviations, and F statistic comparing high and low scores on Benevolence value and scores on the progressive-attitude-toward-education scale in Colombia.

Variable	N	Mean of Progressive Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Benevolence value	7	39.86	2.03	2.35	.13
Low scores on Benevolence value	34	32.32	4.12		
Total	41	31.90	3.94		
		d.f. between	1		
		within	39		
		total	40		

TABLE 41.--Means, standard deviations, and F statistic comparing high and low scores on Benevolence value and scores on the traditional-attitude-toward-education scale in Colombia.

Variable	N	Mean of Traditional Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Benevolence value	6	28.50	1.76	.07	.79
Low scores on Benevolence value	36	28.92	3.84		
Total	42	28.86	3.61		
		d.f. between	1		
		within	40		
		total	41		

H-7a: Persons who score high in need to help others, to be generous, will tend to score high in acceptance of disabled persons.

Peru

As suggested by Table 42, there were no significant differences between those who scored high and those who scored low on the Benevolence value and scores achieved on the ATDP scale. H-7a is not supported for the Peruvian sample.

TABLE 42.--Means, standard deviations, and F statistic comparing high and low scores on Benevolence value on the ATDP scale in Peru.

Variable	N	Means of ATDP Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Benevolence value	24	48.75	7.19	1.09	.30
Low scores on Benevolence value	22	51.00	7.43		
Total	46	49.83	4.31		
			d.f. between	1	
			within	44	
			total	45	

H-7b: Persons who score high in need to help others, to be generous, will tend to score high in progressive attitudes toward education and low in traditional attitudes toward education.

As indicated by Tables 43 and 44, there were no significant differences between persons who scored high and those who scored low on Benevolence value when compared with either progressive attitudes or traditional-attitudes-toward-education. H-7b is not supported for Peru.

TABLE 43.--Means, standard deviations, and F statistic comparing high and low scores on Benevolence value and scores on the progressive attitude-toward-education scale for Peru.

Variable	N	Mean of Progressive Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Benevolence value	23	30.17	2.82	.05	.80
Low scores on Benevolence value	22	30.41	3.86		
Total	45	30.29	3.33		
			d.f. between	1	
			within	43	
			total	44	

TABLE 44.--Means, standard deviations, and F statistic comparing high and low scores on Benevolence value and scores on the traditional-attitude-toward-education scale for Peru.

Variable	N	Mean of Traditional Scale	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
High scores on Benevolence value	23	29.52	3.62	2.01	.16
Low scores on Benevolence value	22	30.95	3.12		
Total	45	30.22	3.42		
			d.f. between	1	
			within	43	
			total	44	

H-7c: Women will score higher than men in (a) the need to help others, (b) positive attitudes toward the disabled, and (c) progressive attitudes toward education.

Colombia

Table 45 indicates that women in Colombia did have significantly higher benevolence scores than did men as hypothesized. Women also had significantly lower scores on the handicapped persons scale (i.e., more positive attitudes toward handicapped persons) which was in the direction of the hypothesis. Women also had slightly higher mean scores on the progressive-attitude-

toward-education scale, but these differences cannot be considered statistically significant.

Hypothesis H-7c, parts a and b, are confirmed in that Colombian women did express a greater need to help others, as measured by scores on the Benevolence scale, and did express more positive attitudes toward disabled persons, as measured by scores in the Handicapped Persons Scale. However, H-7c, part c, cannot be considered supported in that while differences did exist in progressive-attitudes-toward education, and in the direction of the hypothesis, these differences were not statistically significant.

TABLE 45.--Means, standard deviations, and F statistic for Benevolence value scores, ATDP scale scores, and progressive-attitude-toward-education scores for males and females in Colombia.

Variable	Sex	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Benevolence	Male	87	19.35	4.47	6.31	0.01
	Female	132	20.92	4.61		
	Total	219	20.29	4.61		
			d.f. between	1		
			within	217		
			total	219		

Handicapped Persons Scale	Male	84	52.55	7.60	5.02	0.03
	Female	130	50.24	7.21		
	Total	214	51.15	7.43		
			d.f. between	1		
			within	212		
			total	213		

Progressive- attitudes- toward-edu- cation	Male	79	30.49	3.83	0.03	0.84
	Female	131	30.60	4.50		
	Total	210	30.56	4.25		
			d.f. between	1		
			within	208		
			total	209		

Peru

As shown in Table 46, the Peruvian women of the sample scored significantly higher on the Benevolence sub-scale than did men. Women had higher scores on the handicapped persons scale (higher scores imply more negative feelings than do lower scores) which

was not in the hypothesized direction. While the women did have higher scores on the progressive attitudes-toward-education scale as hypothesized, these differences were not statistically significant. H-7c for Peru can be considered confirmed only for "part a" in that while women did have higher scores than did men on the Benevolence scale, but they did not score as predicted on H-7c, parts b and c.

TABLE 46.--Means, standard deviations, and F statistic for Benevolence value scores, scores on the ATDP scale, and progressive-attitude-toward-education scores for male and female comparisons in Peru.

Variable	Sex	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Benevolence	Male	106	16.78	5.06	7.11	0.01
	Female	20	20.00	4.29		
	Total	126	17.29	5.07		
			d.f. between		1	
				within	24	
				total	25	

Handicapped Persons Scale	Male	111	49.24	6.73	0.25	0.62
	Female	21	50.05	6.69		
	Total	132	49.37	6.71		
			d.f. between		1	
				within	130	
				total	131	

Progressive- attitudes- toward-edu- cation	Male	110	29.81	3.51	0.12	0.73
	Female	21	30.10	3.13		
	Total	131	29.86	3.46		
			d.f. between		1	
				within	129	
				total	130	

H-8a: Persons who score high on change orientation will also score high on positive attitudes toward handicapped persons.

Colombia

As indicated in Table 47, the multiple correlation between change orientation and HP attitudes was no significant. When the six change variables are individually partialled out, they make little differential contribution to the multiple correlation. H-8a cannot be considered confirmed for Colombia.

Peru

Table 47 indicates that the multiple correlation between the change variables and HP attitudes is significant at the .01 level of confidence. Table 48 reveals that the variable referring to self change is the only variable contributing significantly to the multiple correlation. H-8a is supported for Peru.

H-8b: Persons who score high on change orientation will also score high on progressive attitudes toward education and low on traditional attitudes toward education.

Colombia

Table 47 reveals that the multiple correlation between change orientation and progressive attitudes was significant at the .01 level of confidence while there was no significant statistical

relationship between traditional attitudes and change orientation. Table 48 indicates that the child rearing variable makes the greatest contribution to the multiple correlations. The change variables of automation and political leadership also contributed to the correlation significantly. H-8b is supported for Colombia.

Peru

Table 47 indicates there was a relationship between the change orientation variables and progressive attitudes toward education although the significance was not at an acceptable level of confidence. The same table indicates there was little relationship between change orientation and traditional attitudes toward education. While H-8b is not supported for the Peruvian sample, the results were in the direction of the hypothesis.

TABLE 47.--Multiple correlations of change orientation variables with attitude-toward-disabled-persons and toward education (progressive and traditional) in Colombia and Peru.

Variable	Colombia N = 241	Peru N = 103
H.P. attitude and change orientation	.12	.32**
Trad Ed. attitude and change orientation	.12	.11
Prog Ed. attitude and change orientation	.33**	.25

** $p < .01$

TABLE 48.--Partial correlations between attitudes-toward-handicapped-persons and attitudes toward education (both progressive and traditional) as related to change orientation variables for Colombia and Peru.

Handicapped Persons Scale (dependent)	Colombia	Peru
Health practices	r -.04	r -.07
Child rearing practices	r -.05	r -.05
Birth control practices	r .05	r .03
Automation	r -.02	r -.08
Political leadership ¹	r -.06	-
Self change	r .02	r -.25**

Traditional-attitudes-toward-education (dependent)		
Health practices	r .02	r .02
Child rearing practices	r .06	r .08
Birth control practices	r .02	r .02
Automation	r .01	r -.04
Political leadership	r -.08	-
Self change	r -.04	r .07

Progressive-attitudes-toward-education (dependent)		
Health practices	r .03	r -.03
Child rearing practices	r .24**	r .18*
Birth control practices	r -.05	r -.01
Automation	r .13*	r -.06
Political leadership	r -.13*	-
Self change	r .03	r -.19*

* $p < .05$

** $p < .01$

¹ The item referring to political leadership change was judged too sensitive to include in the questionnaire in Peru.

Summary of zero-order correlations between attitudes and values in Colombia

Colombia

Tables 49 and 50 summarize the relationships between attitudes and values for Colombia. They show a significant relationship between negative attitudes toward handicapped persons, as measured by the ATDP scale, and the Support value for the male sample of the E group.

A significant negative relationship existed between Conformity value and HP attitudes for the L group. This finding was consistent with the theoretical model of this study. A significant negative relationship existed, as hypothesized, between progressive-attitudes-toward-education and Conformity value for the SER group.

There was a positive relationship between Recognition value and HP attitudes for the SER group. The relationship was not in the hypothesized direction. There was, however, a positive relationship between Recognition value and HP attitudes for the L group. This finding is consistent with the hypothesis.

While the correlation was significant, it is of interest to note that the relationship between Benevolence value and HP attitudes was negative for the SER group which is in the opposite

direction of the hypothesis. As predicted, there was a positive significant relationship between Benevolence value and progressive-attitudes-toward-education in the SER group.

A comparison between traditional-attitudes-toward-education and Independence values resulted in a significant negative correlation in the SER group.

The correlations were significant in a negative direction between progressive educational attitudes and Support value for the male sample of the E group and were significant in a positive direction between progressive attitudes toward education and Independence value for the E group as a whole.

For the L group Support value correlated negatively with progressive-attitudes-toward-education while Benevolence value correlated positively toward traditional educational attitudes.

TABLE 49.--Zero-order correlations between attitude-toward-handicapped persons scale¹ (content) and the Gordon value scale for Colombia.

Group	Support Value		Conformity		Recognition		Independence		Benevolence		Leadership	
	r	N	r	N	r	N	r	N	r	N	r	N
<u>SER</u>												
Male	.032	20	-.090	20	.466*	20	-.021	20	-.127	20	-.197	20
Female	.178	33	-.135	33	.105	33	-.039	33	-.191	33	.083	33
Total	.136	53	-.109	53	.260*	53	-.039	53	-.147	53	-.034	53
<u>Ed</u>												
Male	.390*	21	-.232	21	.246	21	.457*	21	-.240	21	-.247	21
Female	-.058	83	.031	83	-.025	83	-.165	83	.222*	83	.007	83
Total	.018	104	.010	104	.047	104	-.112	104	.114	104	.037	104
<u>Labor</u>												
Total	-.009	38	-.266*	38	.411**	38	.018	38	-.023	38	.037	38

¹ High HP scores indicate negative attitudes

* $p < .05$

** $p < .01$

TABLE 50.--Zero-order correlation between attitudes-toward-education (content) and the Gordon value scale for Colombia.

Group	Support		Conformity		Recognition		Independence		Benevolence		Leadership	
	Prog	Trad	Prog	Trad	Prog	Trad	Prog	Trad	Prog	Trad	Prog	Trad
<u>SER</u>												
Male (N)	.137 18	.002 18	-.269 18	-.026 18	-.134 18	.146 18	-.020 18	-.169 18	.535** 18	.152 18	-.117 18	.142 18
Female (N)	.023 33	.117 33	-.199 33	.033 33	-.022 33	.133 33	.162 33	-.293 33	.277 33	-.111 33	-.149 33	.200 33
Total (N)	.049 51	.157 51	-.257* 51	.033 51	-.036 51	.078 51	.094 51	-.304* 51	.343* 51	.057 51	-.135 51	.132 51
<u>Ed</u>												
Male (N)	-.412* 24	-.170 24	-.105 24	.139 24	-.247 24	-.158 24	.043 24	-.253 24	-.033 24	-.050 24	.220 24	.325 24
Female (N)	-.040 85	-.025 86	-.072 85	.012 86	-.071 85	-.035 86	.208* 85	.058 87	.075 85	.113 86	-.174 85	-.173 86
Total (N)	-.086 109	-.054 110	-.017 109	.037 110	-.095 109	-.066 110	.189* 109	.005 110	.057 109	.085 110	-.110 109	-.060 110
<u>L</u>												
Male (N)	-.328* 32	-.148 34	-.214 32	-.014 34	-.084 32	-.227 34	.153 32	-.113 34	.219 32	.387* 34	-.019 32	-.072 34

* p < .05

** p < .01

Summary of zero-order correlations between attitudes and values in Peru

Peru

Tables 51 and 52 indicate, as hypothesized, a significant positive correlation between Support value and HP attitudes for the female sample of the SER group. There was also a significant negative correlation between Independence value and HP attitudes for the same sample.

There was a significant positive relationship between Benevolence value and HP attitudes for the M sample. The correlation, while not significant, was negative on Benevolence for the SER group. This latter finding was not consistent with the hypothesis of the study.

There was a significant positive relationship between Benevolence value and HP attitudes for the male sample of the SER group. While this relationship was expected, it was predicted that female sample would in general score higher on Support value than men. Table 51 reveals that this was not the case for the SER group in Peru.

There was a significant negative relationship between Leadership value scores on both progressive and traditional-attitudes-toward-education for the total M group.

TABLE 51.--Zero-order correlations between attitude-toward-handi-capped-persons scale (content) and the Gordon value scale for Peru.

Group	Support Value		Conformity		Recognition		Independence		Benevolence		Leadership	
	r	N	r	N	r	N	r	N	r	N	r	N
<u>SER</u>												
Male	.04	21	-.07	21	.03	21	.03	21	-.21	21	.09	21
Female	.77*	7	.39	7	.16	7	-.86**	7	.47	7	.03	7
Total	.20	29	.03	29	.02	29	-.14	29	-.02	29	.07	29
<u>M</u>												
Male	.07	53	-.03	53	.04	53	-.11	53	.26*	53	-.04	53
Female	.27	9	-.05	9	.13	9	.02	9	.10	9	-.13	9
Total	.08	62	-.04	62	.04	62	-.10	62	.21*	62	-.02	62

* $p < .05$

** $p < .01$

TABLE 52.--Zero-order correlations between attitudes-toward-education (content) and the Gordon value scale for Peru.

Group	Support		Conformity		Recognition		Independence		Benevolence		Leadership	
	Prog	Trad	Prog	Trad	Prog	Trad	Prog	Trad	Prog	Trad	Prog	Trad
<u>SER</u>												
Male (N)	.00 21	.07 21	-.04 21	.24 21	.15 21	.25 21	-.28 21	-.01 21	.42* 21	-.05 21	-.22 21	-.01 21
Female (N)	-.54 7	-.25 7	-.22 7	-.01 7	-.01 7	-.01 7	.68* 7	.60 7	-.37 7	.22 7	-.04 7	-.71* 7
Total (N)	-.17 29	-.11 29	-.18 29	.07 29	-.01 29	-.14 29	.13 29	.23 29	.25 29	.08 29	-.27 29	-.25 29
<u>M</u>												
Male (N)	.20 53	-.02 53	.18 53	-.03 53	.13 53	.04 53	-.06 53	-.03 53	-.12 53	-.05 53	-.25* 53	-.09 53
Female (N)	-.38 9	-.03 9	.25 9	.63* 9	-.42 9	-.40 9	.33 9	-.13 9	.11 9	.56 9	-.21 9	-.58* 9
Total (N)	.15 62	-.01 62	.19 62	.11 62	.05 62	-.03 62	.01 62	-.03 62	-.05 62	.14 62	-.28* 62	-.21* 62

* p < .05

Hypothesis related to
characteristics of persons
working directly with disabled
persons (the SER group)

Colombia

H-9a: The SER group will have a lower mean attitude-toward-disabled persons score than will persons in other occupational categories.

This hypothesis was tested by means of analysis of variance using the Michigan State University CDC 3600 computer program for unequal replications-UNEQ1 (Ruble, Kiel, Rafter, 1966), and Duncan's New Multiple Range Test (Edwards, 1960, pp. 136ff), as extended for unequal replications by Kramer (1956). The same procedure was followed in comparing occupational groups in Peru and the cross-national comparisons of the SER group in Colombia, Peru, and Kansas.

Table 53 reports mean scores, standard deviations, and rankings of means for each group. This table also summarizes the analysis of variance calculations.

As indicated from Table 53, the F statistic for the analysis of variance (A of V) was significant at the .005 level for Colombia, which suggests that the sub-group means do not come from a common population. The Duncan's Multiple Means test (Table 54, Appendix A) indicates that a significant difference exists between

the L group and the SER group as well as between the E group and the SER group, but that no difference existed between the L group and the E group. H-9a is considered confirmed.¹

¹ High scores on the Attitude-Toward-Disabled-Persons Scale refer to negative attitudes. The lower the score, the most positive (as measured by this scale) the attitudes toward disabled persons.

TABLE 53.--Means, standard deviations, and analysis of variance of attitude-toward-disabled-persons scores for the three occupational categories in Colombia.

Occupational Category ¹	N	Mean Score	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	61	48.07	7.96	10.45**	.005+
E	110	51.94	6.83		
L	41	54.23	6.00		
Total	212	51.26	7.34		
			d.f. between	2	
			within	209	
			total	211	
Ranking of Means: L (54.23) > E (51.94) > R (48.07)					

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

As indicated from Table 55, the F statistic for the A of V was significant at the .01 level, which suggests that the subgroup means did not come from a common population. The Duncan's Multiple Means Test (Table 56, Appendix A) between the SER and L group was not quite significant at the .05 level of confidence when testing between the four means. However, this likely due to the small N in the labor group. While significant differences apparently do exist among the occupational groups, these differences are not in the direction specified and hence the hypothesis is not confirmed as far as the Peru sample is concerned.

H-1b: SER respondents from the United States will have a lower (i.e., more positive) mean attitude-toward-disabled persons score than will persons from Colombia and Peru.

As indicated from Table 57, the F statistic was significant at the .01 level with the Duncan's Multiple test (Table 58, Appendix A) significant at the .05 level of confidence, indicating that significant differences do exist in the predicted direction. H-9b was considered confirmed.

TABLE 55.--Means, standard deviations, and analysis of variance of attitude-toward-disabled-persons scores for the four occupational categories in Peru.

Occupational Category ¹	N	Mean Score	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	30	51.53	6.91	4.42**	0.01
E	16	51.13	6.33		
M	63	47.83	6.15		
L	9	54.22	6.18		
Total	118	49.70	6.65		
			d.f. between	3	
			within	114	
			total	117	
Ranking of Means: L (54.22) > R (51.53) > E (51.13) > M (47.83)					

¹ SER = Spec. Educ. Rehab.

E = Education

M = Manager/Executive

L = Labor

TABLE 57.--Means, standard deviations, and analysis of variance of attitude-toward-disabled-persons scores for respondents working in the area of SER in Colombia, Peru, and Kansas.

Country	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Colombia	61	48.07	7.96	16.54	0.005+
Peru	30	51.53	6.91		
Kansas	102	44.58	4.59		
Total	193	46.76	6.69		
				d.f. between	2
				within	190
				total	192
Ranking of Means: P (51.53) > C (48.07) > K (44.58)					

H-10a: The SER group will have a higher mean score than will persons in other occupational categories in respect to the value of Benevolence, and lower mean scores in respect to the values of Leadership and Recognition.

Colombia

H-10a: The hypothesis is considered supported in respect to the value of Benevolence. The F statistic of Table 59 and the Duncan's Multiple Means Test of Table 60 (Appendix A) indicates there are significant differences among the groups in the predicted

direction. The Duncan's test suggests there are significant differences between the SER and L group and between the SER and E group, with the differences being nonsignificant between the E group and the L group.

H-10a will also be considered partially supported in respect to the value of Recognition. As shown by Table 61, the SER group scores were lower than the E group as well as being below the L group. The mean differences as tested by Duncan's Multiple Means test (Table 62, Appendix A) were not significantly different between the E and the SER groups but indicate that the SER group is significantly lower on Recognition value than the L group.

While the SER group did have the lowest mean score for the Leadership value score, as seen in Table 63, which was in the predicted direction, the mean differences were not significantly different. The mean score of the E group was higher than the L group. H-10a cannot be considered confirmed for the Leadership value in the Colombian sample.

TABLE 59.--Means, standard deviations, mean rankings, and F statistic for Benevolence value scores according to the three occupational categories in Colombia.

Occupational Category ¹	N	Mean Score	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	59	21.81	3.90	5.70**	0.005+
E	117	20.08	4.57		
L	41	18.80	5.15		
Total	217	20.31	4.61		
			d.f. between	2	
			within	214	
			total	216	
Ranking of Means: SER (21.81) > E (20.08) > L (18.80)					

TABLE 61.--Means, standard deviations, and mean rankings for Recognition value scores according to three occupational categories in Colombia.

Occupational Category ¹	N	Mean Score	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	59	7.14	3.24	7.744	0.005+
E	117	7.45	3.24		
L	41	9.54	3.29		
Total	217	7.76	3.25		
			d.f. between	2	
			within	214	
			total	216	
Ranking of Means: L (9.54) > E (7.45) > SER (7.14)					

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

TABLE 63.--Means, standard deviations, mean rankings, and F statistic for Leadership value scores according to the three occupational categories in Colombia.

Occupational Category ¹	N	Mean Score	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	59	13.46	4.02	0.63	0.54
E	117	14.08	4.13		
L	41	14.12	4.27		
Total	217	13.97	4.12		
			d.f. between	2	
			within	214	
			total	216	
Ranking of Means: E (14.18) > L (14.12) > SER (13.46)					

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

Peru

H-10a - Benevolence. H-10b will be considered supported in respect to the value of Benevolence in Peru. The statistic in Table 64 and Duncan's Multiple Means test (see Table 65, Appendix A) indicates that significant differences do exist among means in the predicted direction. The SER scores are significantly higher than the L scores. While the SER mean score is higher than E as predicted, this difference cannot be considered significant. It should be noted, however, that the number of

respondents in L is very small which of course should indicate caution in terms of interpretation.

Recognition. While the SER has the lowest mean score on Recognition values as predicted, the differences cannot be considered significant. As indicated in Table 66, the E scores are higher than the M scores which is not the predicted direction. H-9 is not considered confirmed for the Peruvian sample on the Recognition value.

Leadership. H-10a will not be supported in respect to the value of Leadership in Peru. While significant differences do exist between M and SER means, as indicated by the F test in Table 67 and the Duncan's Multiple Means Test (Table 68 Appendix A), the small L sample (N - 7) has a lower mean score than does the SER group.

TABLE 64.--Means, standard deviations, mean rankings, and F statistic for Benevolence value scores according to the four occupational categories in Peru.

Occupational Category ¹	N	Mean Score	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	29	19.52	4.47	4.40**	0.01
E	15	17.73	5.43		
M	62	17.18	4.83		
L	7	12.57	2.64		
Total	113	17.57	4.94		
			d.f. between	3	
			within	109	
			total	112	
Ranking of Means: SER (19.52) > E (17.73) > M (17.18) > L (12.57)					

¹ SER = Spec. Educ. Rehab.

E = Education

M = Manager/Executive

L = Labor

TABLE 66.--Means, standard deviations, mean rankings, and F statistic for Recognition value scores according to the four occupational categories in Peru.

Occupational Category ¹	N	Mean Score	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	29	8.45	4.03	0.39	0.76
E	15	9.00	4.23		
M	62	8.48	3.25		
L	7	9.86	2.48		
Total	113	8.63	3.54		
			d.f. between	3	
			within	109	
			total	112	

Ranking of Means: L (9.86) > E (9.00) > M (8.48) > SER (8.45)

¹ SER = Spec. Educ. Rehab.

E = Education

M = Manager/Executive

L = Labor

TABLE 67.--Means, standard deviations, mean rankings, and F statistic for Leadership value scores according to the four occupational categories in Peru.

Occupational Category ¹	N	Mean Score	Standard Deviation	F	Sig. of F
SER	29	12.72	4.65	4.86**	0.005+
E	15	15.27	4.82		
M	62	17.52	6.89		
L	7	12.57	5.09		
Total	113	15.68	6.35		
			d.f. between	3	
			within	109	
			total	112	
Ranking of Means: M (17.52) > E (15.27) > SER (12.72) > L (12.57)					

¹ SER = Spec. Educ. Rehab.

E = Education

M - Manager/Executive

L = Labor

| Colombia-Peru-Kansas

H-10b: The United States SER sample will have a higher mean score than respondents working the same area from Colombia and Peru in respect to the value of Benevolence and a lower mean score in respect to the values of Leadership and Recognition.

Benevolence. While significant differences were evident in Table 69, the differences were not in the predicted direction. The Colombian sample, as shown in Table 70, scored higher than did the U.S. sample on Benevolence. H-10b cannot be considered confirmed as far as the Benevolence value is concerned.

Recognition. Table 71 suggests there were significant differences among sample means but again, as shown in Table 72, not in the predicted direction. Instead of having the lowest mean score on the value of Recognition, U.S. respondents had the highest mean scores on this value. This hypothesis is considered as not confirmed.

Leadership. Significant mean differences were found among the SER group from the three countries (see Tables 73 and 74, Appendix A). As predicted, respondents from the U.S. had lower mean scores for the Leadership value than respondents from Colombia or Peru. H-10b is considered confirmed for the value of Leadership.

TABLE 69.--Means, standard deviations, and F statistic of Benevolence value scores for respondents working in the area of SER in Colombia, Peru, and Kansas.

Country	N	Means	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Colombia	59	21.81	3.90	3.02	0.05
Peru	29	19.52	4.47		
Kansas	100	20.22	5.23		
Total	188	20.61	4.79		
				d.f. between	2
				within	185
				total	207

Ranking of Means: C (21.81) > K (20.22) > P (19.52)

TABLE 71.--Means, standard deviations, mean rankings, and F statistic for Recognition value scores for respondents working in the area of SER in Colombia, Peru, and Kansas.

Country	N	Means	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Colombia	59	7.14	3.24	13.64	0.005+
Peru	29	8.45	4.03		
Kansas	100	10.29	3.91		
Total	188	9.02	3.98		
				d.f. between	2
				within	185
				total	187

Ranking of Means: K (10.29) > P (8.45) > C (7.14)

TABLE 73.--Means, standard deviations, mean rankings, and F statistic for Leadership value scores for respondents working in the area of SER in Colombia, Peru, and Kansas.

Country	N	Means	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Colombia	59	13.46	4.02	9.14	0.005+
Peru	29	12.72	4.65		
Kansas	100	9.89	6.20		
Total	188	11.45	5.61		
Ranking of Means: C (13.46) > P (12.72) > K (9.89)					

Summary of H-10 analyses

Colombia. The hypothesis for the respondent groups in Colombia was supported for the values of Benevolence and Recognition. While the hypothesis relating to the Leadership value was not confirmed as being significantly different, the SER group did have the lowest mean score in the predicted direction.

Peru. The hypothesis relating to the Benevolence values for respondent groups in Peru was significant in the predicted direction. As predicted, the SER group had the lowest mean score on Recognition value, however, differences were not statistically significant. Significant differences did exist for the value of

Leadership, but these differences were not in the predicted direction. The hypothesis, then, was supported for the Benevolence value but not for Recognition and Leadership values for the Peruvian sample.

Comparative Analyses. In the three-country comparison for respondents working in the area of SER significant mean differences were apparent for the three values considered but not in the predicted direction for Benevolence and Recognition values. The hypothesis, however, was considered confirmed for the value of Leadership.

H-11a: The SER group will have higher mean scores on progressive-attitude-toward-education than will persons in other occupational categories.

Colombia

Table 75 indicates means, standard deviations, mean rankings and F statistic for progressive-attitude-toward-education scores according to the occupational categories. These findings are similar to the findings of Felty's (1965) Costa Rican study. The SER group had the lowest mean ranking while the E group had the highest mean ranking for this variable. The non-significant differences are also not in the hypothesized direction. H-11a is therefore, not confirmed.

TABLE 75.--Analysis-of-variance of progressive-attitude-toward-education scores for the three occupational categories in Colombia.

Occupational Category ¹	N	Mean	Standard Deviation	F	Sig. of F
SER	58	30.02	4.69	.86	0.43
E	116	30.90	4.06		
L	35	30.46	4.08		
Total	209	30.58	4.24		
				d.f. between	2
				within	206
				total	208

Ranking of Means: E (30.90) > L (30.46) > SER (30.02)

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

H-11b: The SER group will have lower mean scores in traditional-attitudes-toward-education than will persons in other occupational categories.

Table 76 indicates there are no significant differences between the means of the three occupational groups. However, the SER group did have the lowest mean scores in the predicted direction of the hypothesis.

TABLE 76.--Analysis-of-variance of traditional-attitudes-toward-education scores for the three occupational categories in Colombia.

Occupational Category ¹	N	Mean	Standard Deviation	F	Sig. of F
SER	58	30.01	4.69	.86	.43
E	116	30.90	4.06		
L	35	30.46	4.07		
Total	209	30.58	4.24		
			d.f. between	2	
			within	206	
			total	208	

Ranking of Means: E (30.90) > L (30.46) > SER (30.01)

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

H-11a: The SER group will have higher mean scores in progressive-attitudes-toward-education scores than will persons in other occupational categories.

Peru

Table 77 suggests that the means of the four groups in Peru are not significantly different on progressive attitudes. The E group has a higher mean than does the SER group which is also not in the predicted direction. H-11a for the Peru sample is, therefore not supported.

TABLE 77.--Means, standard deviations, mean rankings, and F statistic for progressive-attitudes-toward-education scores according to the four occupational categories in Peru.

Occupational Category ¹	N	Mean Score	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	20	30.27	3.76	1.34	0.27
E	17	31.47	3.74		
M	63	29.54	3.58		
L	9	30.00	2.92		
Total	119	30.03	3.62		
		d.f. between	3		
		within	115		
		total	118		
Ranking of Means: E (31.47) > SER (30.27) > M (30.00) > B (29.54)					

¹ SER = Spec. Educ. Rehab.

E = Education

M = Manager/Executive

L = Labor

Table 78 indicates that the mean scores do not significantly differ. H-11b is not supported for Peru.

TABLE 78.--Means, standard deviations, mean rankings, and F statistic for traditional-attitudes-toward-education scores according to the four occupational groups in Peru.

Occupational Category ¹	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
SER	30	30.27	3.76	1.33	.27
E	17	31.47	3.74		
M	63	29.54	3.58		
L	9	30.00	2.91		
Total	119	30.03	3.62		
			d.f. between	3	
			within	115	
			total	112	

¹ SER = Spec. Educ. Rehab.

E = Education

M = Manager/Executive

L = Labor

H-11c: The SER group from the United States will have higher mean scores on progressive-attitudes-toward-education than will persons in the same occupational group from Colombia and Peru.

Table 79 indicates that the sample from Kansas did have the highest mean score on the progressive attitude scale. While this finding is in the direction of the hypothesis the level of confidence is not sufficiently high for confirmation.

H-11d: The SER group from the United States will have lower mean scores in traditional-attitudes-toward-education than will persons in the same occupational group from Colombia and Peru.

Table 80 indicates that the country samples were not significantly different on traditional-attitudes-toward-education.

H-11d is therefore not supported.

TABLE 79.--Means, standard deviations, mean rankings, and F statistic for progressive-attitude-toward-education scores for respondents working in the area of SER in Colombia, Peru, and Kansas.

Country	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Colombia	58	30.02	4.69	1.89	0.15
Peru	30	30.27	3.76		
Kansas	102	31.16	3.14		
Total	190	30.67	3.79		
				d.f. between	2
				within	187
				total	189
Ranking of Means: K (31.16) > P (30.27) > C (30.02)					

TABLE 80.--Means, standard deviations, mean rankings, and F statistic for traditional-attitude-toward-education scores for respondents working in the area of SER in Colombia, Peru, and Kansas.

Country	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Colombia	58	30.02	4.69	1.97	0.14
Peru	17	31.47	3.74		
Kansas	102	31.16	3.14		
Total	177	30.81	3.79		
			d.f. between	2	
			within	174	
			total	176	
Ranking of Means: P (31.47) > K (31.16) > C (30.02)					

H-12: The SER group will have higher mean scores than other occupational groups on the following change orientation variables: (a) health practices, (b) child rearing practices, (c) birth control practices, and (d) automation.

Colombia

Table 81 reveals that the SER group had higher mean scores only on the change oriented variable related to child rearing practices. The Duncan's test (Table 82, Appendix A) indicates significant differences do exist between the SER group and the L

group as well as between the E group and the L group. However, the SER group and E group means are not statistically different. The SER-E group difference part of H-12 can only be considered supported in the sense of direction but not in terms of significance.

Table 81 indicates that the E group had the highest mean score on the health practices variables which was significantly higher (see Table 83, Appendix A) than the L group but was not significantly different from the SER group. This difference is not in the direction of the hypothesis.

The SER and group E had identical mean scores on the birth control variable. These means were not significantly different from the L group.

The E group had the highest mean score on the automation variable which was significantly higher (see Table 84, Appendix A) than the L group but was not significantly different from the SER group. The SER group was also significantly higher than the L group.

Summary for H-12 in Colombia

The only variable in which H-12 can be considered confirmed for the Colombian sample is in the case of child rearing practices. This variable was in the direction of the hypothesis in that the

SER group had the highest mean. While the SER group mean was significantly different from the L group it was not significantly different from the E group.

The E group mean was significantly higher than the L group on health practices, and automation measures but was not significantly different from the SER group.

There were few differences between the SER group and the E group. Except in the case of the birth control measure, the SER group and the E group had significantly different mean scores from the L group.

TABLE 81.--Means, standard deviations, and F statistic related to four change variables for three occupational groups in Colombia.

Variable	Group ¹	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Health practices	SER	66	3.59	.70	13.63	.005+
	E	124	3.64	.69		
	L	46	2.98	.95		
	TOTAL	236	3.50	.79		
				d.f. between	2	
				within	233	
				total	235	
Ranking of Means: E (3.64) > SER (3.59) > L (2.98)						
Child rearing practices	SER	67	3.27	.79	5.84	.005+
	E	123	3.22	.95		
	L	46	2.74	.86		
	TOTAL	236	3.14	.91		
				d.f. between	2	
				within	233	
				total	235	
Ranking of Means: SER (3.27) > E (3.22) > L (2.74)						
Birth control	SER	68	3.21	.72	6.00	.005+
	E	120	3.36	.83		
	L	45	2.87	.89		
	TOTAL	233	3.22	.83		
				d.f. between	2	
				within	230	
				total	232	
Ranking of Means: E (2.09) > SER (2.09) > L (2.15)						
Automation	SER	68	3.21	.72	6.00	.005+
	E	120	3.36	.83		
	L	45	2.87	.89		
	TOTAL	233	3.22	.83		
				d.f. between	2	
				within	230	
				total	232	
Ranking of Means: E (3.36) > SER (3.21) > L (2.87)						

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

Peru

As indicated in Table 85, the SER group had the lowest mean score of any group of the sample on the health practice variable which is in the opposite direction hypothesized. On the child rearing item the SER group mean score was lower than the E group or M group although higher than the L group. On the birth control item the SER group was lower than the E group but higher than the M or the L group (see Table 86, Appendix A). The SER score on the automation item was lower than the E group and the M group but higher than the L group. H-12 is therefore not supported for any of the change orientation variables in Peru.

TABLE 85.--Means, standard deviations, and F statistic related to four change variables on four occupational groups in Peru.

[illegible]

TABLE 85.-- (cont.)

Variable	Group ¹	N	Mean	Standard Deviation	F	Sig. of F
Automation	SER	30	3.17	.91	2.08	.10
	E	17	3.14	.71		
	M	63	3.27	.88		
	L	9	2.56	1.01		
	TOTAL	119	3.21	.89		
					d.f. between	3
					within	115
					total	118

Ranking of Means: M (3.27) > SER (3.17) > E (3.14) > L (2.56)

¹ SER = Spec. Educ. Rehab.

E = Education

M = Manager/Executive

L = Labor

H-13: The SER group will have higher mean scores than other occupational groups on amount of contact with Mentally Retarded and Emotionally Disturbed Persons.

Colombia

As indicated by Table 87 the SER group did have, as predicted, higher mean scores than did the E group or the L group on number of contacts with mentally retarded and emotionally disturbed persons. The Duncan's test (Tables 88 and 89, Appendix A) indicates that the SER group differs significantly from the E and L

group but that the E and L group do not differ among themselves.
H-13 is considered confirmed for Colombia.

TABLE 87.--Means, standard deviations, and F statistic related to contacts with mentally retarded and emotionally disturbed persons for four occupational groups in Colombia.

Variable	Group ¹	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Contacts with mentally retarded persons	SER	60	2.72	1.45	18.74	.005+
	E	108	1.71	1.37		
	L	43	1.40	.98		
	TOTAL	211	1.93	1.30		
d.f. between					2	
within					208	
total					210	
Ranking of Means: SER (2.72) > E (1.71) > L (1.40)						
Contacts with emotionally disturbed persons	SER	59	2.36	1.52	12.54	.005+
	E	92	1.59	1.12		
	L	39	1.21	.70		
	TOTAL	190	1.75	1.26		
d.f. between					2	
within					187	
total					189	
Ranking of Means: SER (2.36) > E (1.59) > L (1.21)						

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

Peru

The SER group did have the highest mean scores on amount of contact with mentally retarded and emotionally disturbed persons.

Tables 91 and 92 (Appendix A) indicate that significant differences existed between the SER and the M group on amount of contact with mentally retarded persons and between the SER-M group and the SER-E group on amount of contact with emotionally disturbed persons. The SER group did not differ from the E or the L group nor did they differ between themselves.

TABLE 90.--Means, standard deviations, and F statistic related to contacts with mentally retarded and emotionally disturbed persons for four occupational groups in Peru.

Variable	Group ¹	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Contacts with mentally retarded	SER	28	2.29	1.36	3.96	0.01
	E	16	1.88	1.31		
	M	57	1.78	0.82		
	L	9	1.42	1.39		
	TOTAL	110	1.74	1.15		
				d.f. between	3	
				within	106	
				total	109	
Ranking of Means: SER (2.29)> E (1.88)> L 1.78)> M (1.42)						
Contacts with mentally disturbed	SER	29	2.66	1.57	8.40	.005+
	E	15	2.07	1.49		
	M	57	1.37	0.65		
	L	9	1.67	1.41		
	TOTAL	110	1.83	1.26		
Ranking of Means: SER (2.66)> E (2.07)> L (1.67)> M (1.37)						

¹ SER = Spec. Educ. Rehab.

E = Education

M = Manager/Executive

L = Labor

Differences between the
various occupational
groups on mean scores on
the value sub-scales

Colombia. Three of the value sub-scales were considered in the testing of the hypothesis: those of Benevolence, Leadership, and Recognition. Values of Support, Conformity, and Independence have yet to be considered. Table 93 summarizes the latter three differences for the Colombian sample. There were no differences at a statistically acceptable level among the three occupational group mean scores. It is of interest to note, however, the SER group had the lowest mean score on Support value and the highest mean score on Conformity among the groups. These results would not support the general theoretical model of this study.

Peru. The results of the Peruvian sample, Table 94, are directionally similar to those of the Colombian sample for the values of Support, Conformity, and Independence. The SER group was lower on mean scores of Support value than was the E group and the L group. The SER group was higher on the Conformity value than the other groups of the sample. Only the E group scored higher on the Independence value. These results are found in Table

Comparative Analyses. As indicated in Table 95, the Kansas SER group had significantly higher mean scores on the value of

Support (Table 96, Appendix A) and significantly lower mean scores on the value of Conformity (Table 97, Appendix A) than did the SER groups in Colombia and Peru. There were no significant differences on the Independence value among the SER groups of the three samples.

TABLE 93.--Comparison of mean differences, standard deviations, and F statistic in respect to three value variables, and three occupational categories in Colombia.

Variable	Group ¹	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Support value	SER	59	9.780	4.030	2.1387	0.12
	E	117	10.222	3.817		
	L	41	11.342	3.183		
	TOTAL	217	10.313	3.780		
				d.f. between	2	
				within	214	
				total	216	
Conformity value	SER	59	22.949	3.803	0.4777	0.63
	E	117	22.470	4.036		
	L	41	22.171	4.647		
	TOTAL	217	22.544	4.087		
				d.f. between	2	
				within	214	
				total	216	
Independence value	SER	59	14.356	4.884	0.4655	0.63
	E	117	14.658	4.620		
	L	41	13.829	5.024		
	TOTAL	217	14.419	4.758		
				d.f. between	2	
				within	214	
				total	216	

¹ SER = Spec. Educ. Rehab. E = Education L = Labor

TABLE 94.--Comparison of mean differences, standard deviations, and F statistic in respect to three value variables, and four occupational categories in Peru.

Variable	Group ¹	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Support value	SER	29	12.80	3.69	2.03	0.11
	E	15	14.00	4.38		
	M	62	12.05	3.88		
	L	7	14.86	3.72		
	TOTAL	113	12.47	3.95		
Conformity value	SER	29	21.07	3.38	2.30	0.08
	E	15	19.80	3.69		
	M	62	18.48	5.06		
	L	7	19.00	3.61		
	TOTAL	113	19.35	4.52		
Independence value	SER	29	16.28	6.69	1.15	0.38
	E	15	14.27	4.76		
	M	62	16.05	6.27		
	L	7	19.43	4.32		
	TOTAL	113	16.08	6.12		

¹ SER = Spec. Educ. Rehab.

E = Education

M = Manager/Executive

L = Labor

TABLE 95.--Comparison of mean differences, standard deviations, and F statistic in respect to three value variables for respondents in the SER group in Colombia, Peru, and Kansas.

Variable	Country	N	Mean	Standard Deviation	F	Sig. of F
Support value	Colombia	59	9.78	4.07	69.07**	.005+
	Peru	29	12.00	3.69		
	Kansas	100	17.65	4.47		
	TOTAL	188	14.31	5.57		
			d.f. between	2		
			within	185		
			total	187		
Ranking of Means: K (17.65) > P (12.00) > C (9.78)						
Conformity value	Colombia	59	22.95	3.80	4.57**	.005+
	Peru	29	21.07	3.38		
	Kansas	100	15.30	6.47		
	TOTAL	188	18.59	6.41		
			d.f. between	2		
			within	185		
			total	187		
Ranking of Means: C (22.95) > P (21.97) > K (15.30)						
Independence value	Colombia	59	14.36	4.88	1.52	.22
	Peru	29	16.28	6.69		
	Kansas	100	15.82	6.10		
	TOTAL	188	15.43	5.86		
Ranking of Means: P (16.28) > K (15.82) > C (14.37)						

Sex differences as indicated
by mean scores on the value
sub-scales

Colombia. Table 98 indicates that males of the Colombian sample had significantly lower mean scores on Benevolence value and significantly higher mean scores on Recognition value than did the females of the same sample. This finding is consistent with the theoretical model of this study. There were no significant differences, as indicated by Table 97 among the group mean scores of the values of Support, Conformity, Independence, and Leadership.

Peru. Table 99 indicates that the females of the Peruvian sample scored significantly higher on the Benevolence sub-scale than did the males and that males had significantly higher mean scores on the value of Leadership. There were no significant differences among males and females in Peru on the values of Recognition, Support, Conformity, and Independence.

TABLE 98.--Comparison of mean differences, standard deviations, and F statistic in respect to six value variables for males and females in Colombia.

Variable	Sex	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Benevolence value	Male	87	19.345	4.474	6.3067	0.01
	Female	132	20.924	4.606		
	Total	219	20.297	4.609		
Recognition value	Male	87	8.598	3.571	9.9130	0.005+
	Female	132	7.174	3.063		
	Total	219	7.740	3.340		
Support value	Male	87	10.379	3.445	0.0210	0.86
	Female	132	10.303	4.023		
	Total	219	10.333	3.796		
Conformity value	Male	87	22.575	4.406	0.0176	0.86
	Female	132	22.500	3.853		
	Total	219	22.531	4.072		
Independence value	Male	87	14.448	4.819	0.0068	0.89
	Female	132	14.394	4.726		
	Total	219	14.416	4.752		
Leadership value	Male	87	14.230	4.142	0.4118	0.53
	Female	132	13.864	4.127		
	Total	219	14.009	4.128		

TABLE 99.--Comparison of mean differences, standard deviations, and F statistic in respect to six value variables for males and females in Peru.

Variable	Sex	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Benevolence value	Male	106	16.78	5.06	7.11	0.01
	Female	20	20.00	4.29		
	Total	126	17.29	5.07		
Recognition value	Male	106	8.66	3.75	0.02	0.87
	Female	20	8.55	2.93		
	Total	126	8.64	3.63		
Support value	Male	106	12.44	4.30	0.34	0.57
	Female	20	11.85	3.56		
	Total	126	12.35	4.18		
Conformity value	Male	106	19.19	4.44	0.06	0.80
	Female	20	19.45	5.42		
	Total	126	19.23	4.55		
Independence value	Male	106	16.16	6.28	0.28	0.60
	Female	20	16.95	5.20		
	Total	126	16.29	6.11		
Leadership value	Male	106	16.54	6.31	4.86	0.03
	Female	20	13.20	6.57		
	Total	126	16.01	6.31		

Differences between male
and female mean scores on
attitude variables

Colombia. Males, as shown in Table 100, scores significantly higher (i.e., negatively) on attitudes-toward-disabled-persons than did the females from Colombia. There were no significant sex differences on traditional and progressive attitudes toward education.

Peru. As indicated by Table 101, there were no significant differences on the attitude-toward-disabled-persons or toward traditional or progressive attitudes toward education for male and female respondents in Peru.

TABLE 100.--Comparisons of mean differences, standard deviations, and F statistic in respect to three attitude variables for males and females in Colombia.

Variable	Sex	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Attitudes toward disabled persons	Male	84	52.5476	7.5074	5.0201*	0.03
	Female	130	50.2385	7.2066		
	Total	214	51.1446	7.4312		
				d.f. between	1	
				within	212	
				total	213	
Traditional attitudes toward education	Male	81	29.0247	4.1862	0.1416	0.71
	Female	131	29.2290	3.6131		
	Total	212	29.1509	3.8337		
				d.f. between	1	
				within	210	
				total	211	
Progressive attitudes toward education	Male	79	30.4937	3.8293	0.0281	0.84
	Female	131	30.5954	4.5009		
	Total	210	30.5571	4.2516		
				d.f. between	1	
				within	208	
				total	219	

*

TABLE 101.--Comparisons of mean differences, standard deviations, and F statistic in respect to three attitude variables for males and females in Peru.

Variable	Sex	N	Mean	Standard Deviation	<u>F</u>	Sig. of <u>F</u>
Attitude toward disabled persons	Male	111	49.24	6.73	0.25	0.62
	Female	21	50.05	6.70		
	Total	132	49.37	6.71		
Traditional attitudes toward education	Male	110	29.93	3.77	0.03	0.83
	Female	32	30.09	4.05		
	Total	132	29.96	3.80		
Progressive attitudes toward education	Male	110	29.81	3.53	0.12	0.73
	Female	21	30.10	3.13		
	Total	131	29.86	3.46		

CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

This chapter will be divided into the three major sections suggested by the chapter title. Part I will be a summary of the theoretical and methodological issues. Under the latter heading there will be a summary of hypothesis construction, technical problems, sample, instruments, and analyses procedures.

Part II will be devoted to a discussion of hypotheses testing. The first two hypotheses are concerned with content and intensity scaling. Hypothesis 3-8 compare high and low scores of the major variables of the study on the total population within Colombia and Peru. Hypothesis 9-13 compare the SER group with other occupational groups on basically the same variables within Colombia and Peru. Comparisons between the SER groups of Colombia, Peru, and Kansas will also be made.

The final portion of the chapter, Part III, will deal with recommendations concerning the hypotheses, instruments, sample, and analyses procedures.

Part I: Summary of the Theoretical and
Methodological Issues

In the introductory chapter a statement was made to the effect that the main focus of the study would be on the relationship between interpersonal values, personal contact, attitudes and certain demographic variables. The assumption was made that both value and contact serve as determinants of attitudes.

Summary of theory

Kerlinger's theoretical model was used to study attitudes toward education. He postulates a basic dichotomy which consists of a restrictive-traditional or permissive-progressive dimension of educational attitudes. He further suggests that the sharpness of this dichotomy is dependent upon occupational role, knowledge of and experience with education as well as the perceived importance of education (Kerlinger, 1956, p. 312). The present research is based on Kerlinger's assumption that the progressive-traditional dimension of attitudes toward education generalize to attitudes in other areas.

The theoretical framework of the present research is generally consistent with the social-psychological orientation of Wright (1961) and Meyerson (1955, 1963) as far as attitudes toward physical disability are concerned. While their interactional

propositions included such concepts as self, other, reference groups, and role, the main focus of this study had to do with attitudes and values as they relate to physical disability and to education.

Rosenberg (1960), Katz (1960), Guttman and Foa (1951), and others have postulated certain relationships between attitudes and values. Katz points out that people are generally more inclined to change or give up attitudes inconsistent or unrelated to central values. From this orientation, there would be an unexpected consistency between the basic value of equality and the more specific attitude of favorableness toward opportunities for disabled persons and toward progressive education since the latter stresses individual participation and the inherent assets of the person.

With reference to physical disability, Wright, et al. (1960) points out that values can be clustered according to whether they are derived from (a) comparisons or from (b) intrinsic assets. One of the assumptions of the study was that the SER group would view disabled persons from more of an asset value orientation than would other occupational groups. A logical extension of this assumption was that the postulated asset value orientation of the SER group would generalize to favorable progressive-attitudes-toward-education as well as favorable attitudes toward change orientation as measured by the indices of the study.

Guttman and Foa (1951) have shown that attitude intensity is related to the amount of social contact with the attitude object. Zetterberg (1963) observed that attitude intensity on the favorable-unfavorable continuum is related to perceived freedom or constraint of social interaction and whether this interaction is perceived as rewarding. Attempts were made to test interaction between contact frequency and the related contact indices of enjoyment of the contact and ease of avoidance of it.

Summary of hypotheses construction

Several of the hypotheses were originally constructed by Felty and used in his study (1965). Felty's hypotheses were extended in the present study to apply to attitudes toward education (both progressive and traditional) as well as attitudes toward disabled persons. The change variables (H:8, H:12) were added as a result of Felty's recommendations (1965). H:13 was an extension of the contact variables as applied to frequency of contact with emotionally disturbed and mentally retarded persons.

Guttman's scaling approach to cross-cultural analysis provided the rationale for the construction of H-1 and H-2. Scale and intensity analysis attempts to compare data from one linguistic group to another with some assurance that similar outcomes actually reflect similar psychological orientation toward the attitude object; i.e., education and/or handicapped persons.

Rosenberg, Guttman, Foa, and Zetterberg have suggested that frequency of contact is directly related to attitude intensity regardless of content direction. H-3 and H-4 were aimed at testing this assumption.

H-5 through H-7 were aimed at testing the assumptions of Wright et al. (1960) which posit there will be a differential evaluation of others between those who hold asset oriented values and those who hold comparative oriented values.

The assumptions of H-8 postulate a relationship between progressive educational attitudes and change orientation, as well as an asset orientation toward others.

H-9 through H-13 were derived from the assumptions that persons working in the area of special education and rehabilitation would have more progressive attitudes toward education; be more change oriented; and have more expressed asset oriented values than would other occupational groups. It was also assumed that attitudes, whether progressive or traditional, would generalize to other areas.

Summary of technical problems

Scale and intensity analysis was originally attempted in order to obtain data which could be compared from one linguistic group to another with some assurance that similar outcomes actu-

ally reflect similar psychological orientations toward the attitude object. To use this particular approach, it is first necessary to obtain a Guttman scale of the content component of the attitude and then to plot total content scores against total intensity scores for each respondent.

In this particular study there was a departure from standard Guttman procedures by the use of the Lingoes Multiple Scalogram Analysis. In the Lingoes procedure, if several attitude dimensions are latent in the data, the procedure is designed to extract these dimensions separately, rather than scale all of the items together.

As reported in the previous chapter, none of the attitude instruments formed meaningful unidimensional scales in the Guttman sense. In Felty's study (1965), scale analysis was only marginally successful. While the reasons for the failure of the items to scale in the present study are not readily apparent, it seems reasonable to assume that much of the problem is related to the fact that attitudes are complex and seldom unidimensional in nature. A revision of the Lingoes MSA program (i.e., the Guttman-Lingoes Multidimensional Scalogram Analysis - I) allows for multidimensional analysis of data as well as multi-unidimensional analysis.

It must be remembered that none of the attitude scales were originally designed for scalogram analysis. In the recommendation section of this chapter considerable emphasis will be placed upon the necessity of developing attitude scales through facet analysis in order to facilitate valid cross-cultural comparability.

Felty (1965) discussed limitations in his study which resulted from a lack of concept equivalence. In other words, how much is lost in the translation of the instruments into a different language and cultural setting? In an effort to solve this problem, Dr. John E. Jordan, the major advisor to this dissertation, went over the instruments with the translators from Peru and Colombia before translation in an effort to ensure as much accuracy as possible in both language and concept equivalence. As a result, the instruments were separately translated into both Colombian and Peruvian Spanish.

Inasmuch as this study was considered exploratory in nature, no attempt was made to secure a random national sample. The proposal recommended a minimum sample of 50 respondents in each of four occupational groups: Special Education and Rehabilitation Workers, Educators, Managers and Executives, as well as a low income Labor group.

Adequate samples were gathered from only two of the occupational groups in Peru and from three in Colombia. These omis-

sions occurred in spite of careful planning. It must be remembered that numerous frustrations, such as schedule cancellations, are somewhat inherent in the developing countries that do not have a research tradition.

While every effort was made to explain the purpose of the research project to the respondents, it may have had little tangible meaning because it seemed so far removed from their usual experiences. Added to this problem of meaning was the time factor involved in filling out the questionnaire. It required an average of two hours to fill out the six instruments, which for the most part was done on the respondent's own time. If they were unable to grasp the relationship between filling out questionnaires and research objectives, there may have been a tendency to resent this effort.

The nationals who assisted in the group administration of the instruments were dedicated and enthusiastic. However they did not have the opportunity to become thoroughly "saturated" with the study. In fact, they had had little previous exposure to any kind of research. While their work was commendable, limitations resulted from their limited understanding of the research project. They were not totally prepared to deal with all the questions that arose during the administration of the

instruments. While conscientious efforts were made on the part of the researchers to give a thorough orientation to the administrative assistants, it must be remembered that these assistants were working upon the handicap of using a second language in an area where they had had little previous training. They were also communicating with respondents who had never filled out a questionnaire and whose cultural milieu stressed the importance of "having the right answer".

Ideally, nationals who are involved in future instrument administration should be thoroughly exposed for lengthy periods of time to the full implications of the study. This kind of exposure, although beyond the limits of item and money available for this study, would add immeasurably to the ideal of concept equivalence and general research excellence.

Instruments

The major variables of the study might be summarized as follows: attitudes toward education and physical disability as they are influenced by values, contact, and related demographic indices.

The Attitudes Toward Education Scale, developed by Kerlinger, (Kerlinger, 1958, 1961; Kerlinger and Kaya, 1959) was used to measure both progressive and traditional attitudes toward educa-

tion. A relationship between progressive-attitudes-toward-education and positive attitudes toward physical disability was hypothesized.

The hypotheses relating to Attitudes-toward-handicapped-persons was instrumented by the Attitudes Toward Disability Scale developed by Yuker and associates (1960).

Both the Kerlinger and Yuker scales were modified with a Likert-type intensity statement. This statement, containing four response alternatives, asked the respondent to indicate how strongly (i.e., sure) he felt about his answer to the content statements of the two scales.

Asset and comparative value orientations were measured by three sub-scales of the Gordon Scale of Values. Asset value orientation toward others was measured by the sub-scale of Benevolence which Gordon (1963, p. 3) described as "Doing things for other people, sharing with others, helping the unfortunate, being generous". Comparative value orientation toward others were measured by Recognition value described by Gordon (1963, p. 3) as "Doing what is socially correct, following regulations closely, doing what is accepted and proper, being a conformist", and by Leadership value which Gordon (1963, p. 3) defined as "Being in charge of other people, having authority over others, being in a position of leadership or power".

The contact frequency variable was modified by: enjoyment of contact, ease of avoidance of contact, and acceptable alternatives to contact for both education and physical disability. Change orientation questions and demographic variables were also included in the major questionnaire.

The questionnaire items referring to religiosity, preference for personal relationships, and institutional satisfaction were not analyzed.

Sample

Colombia: The three occupational groups in the Colombian sample consisted of 241 adults including 94 males and 147 females. The groups were represented as follows: the SER group (all from Roosevelt School of Bogota) had an N of 67, the E group consisted of 128 elementary and secondary school teachers, and the L group had an N of 46. Table 1 reveals that the SER group and the E group consisted largely of female respondents. The L group, on the other hand, was entirely a male sample.

Peru: This research sample consisted of a total of 134 respondents. Of this number, 112 were male and 22 were female. Group M, with an N of 96, consisted largely of middle echelon government executives. The SER group consisted of 38 respondents from schools which were members of a rehabilitation coor-

dinating committee known as the Patronota. While some of the members of the Patronota were not professional special education and rehabilitation workers as such, they were none the less vitally interested in the SER field.

Kansas: The SER group from Kansas consisted of 22 males and 81 females for a total SER sample of 103. A fuller explanation of this sample is given in Chapter III.

The interpretative difficulties arising from the differences in the number of male and female respondents as well as the differences in the number of respondents in the occupational groups are dealt with in following sections of this chapter.

Summary of statistical procedures

Two frequency programs designated as FCC I and FCC II were used to compile the frequency distributions of each respondent for every item.

Scale and intensity analysis was attempted. The items were dichotomized by the "CUT" Computer program developed by Hafterson (1964) at Michigan State University. The dichotomized items were then scaled by the Multiple Scalogram Analysis program in use with the CDC 3600 Computer at Michigan State University (Lingoes, 1963; Hafterson, 1964). All scales, for both content and intensity, were submitted to the same procedure.

The UNEQ1 routine (Ruble, Kiel, Rafter, 1966) was used to calculate the one-way analysis of variance statistics. The program was designed to handle unequal frequencies occurring in the various categories. In addition to the analysis of variance tables, the frequency, sum, mean, standard deviation, sum of squares, and sum of squared deviations of the mean were included for each category. The approximate significance probability of the F statistic was also automatically pointed out by the computer.

Zero-order as well as partial and multiple correlations were also used. These programs have been written to handle missing data in such a way that correlations are based only on respondents who answered the indicated item. The Multiple Correlation program yields the following information: means and standard deviations for each variable, the matrix of simple correlations between all variables, and multiple correlations of selected variables of the criterion, the beta weights of all predictor variables used, a test of significance for each beta weight, and the partial correlations between each predictor and the criterion.

Part II: Discussion of the Hypotheses

Scale and intensity analysis: (H:1, H:2)

Scale and intensity analysis was originally attempted to order to obtain data which could be compared from one linguistic group to another, with some assurance that similar outcomes actu-

ally reflect similar psychological orientations toward the attitude object. It has been typically found that when intensity and content scores are plotted together so that content is on the abscissa and intensity is on the ordinate, that intensity forms a U-shaped or J-shaped curve in relation to the content dimension. The low point of this curve has been found to be the true point of division between positive and negative responses.

This kind of analysis assumes that data is unidimensional before scaling is relevant. It has been recognized for some time, however, that attitudes are complex and seldom unidimensional in nature. The author feels that the complexity of attitude measurement accounts for the fact that the first two hypotheses relating to content and intensity were not confirmed.

Lingoes's (1963) MSA program was used in place of the Guttman scale analysis for essentially two reasons. First, the MSA was designated for computer use which saved endless hours of analysis while greatly reducing the possibility of error. Second, the Lingoes program permitted multi-unidimensional analysis. While this program extended Guttman's pioneer scaling method by allowing for the development of several unidimensional scales at the same time, it did not provide for revealing multidimensional interrelationships within the data.

Lingoes and Guttman extended the MSA program. Known as MSA-I, this computer program is devised to reveal the scale properties of items that are multidimensional in nature, and is scheduled to become operational at Michigan State University in the spring of 1966. It is recommended that MSA-I be used in later studies that are a part of the research project currently underway at Michigan State University under the direction of Dr. John E. Jordan.

Hypothesis relating to
contact frequency and
intensity (H:3)

Colombia: Table 102, a summary chart of the hypothesis, reveals that H-3 was not confirmed for the Colombian sample. The mean intensity scores on the attitude scales were not significantly different between those who indicated high frequency of contact and those who indicated low frequency of contact with handicapped persons and/or education. Approximately one-fourth of the sample who indicated the most contacts with disabled persons and/or education were placed in the high frequency contact group while approximately one-fourth of those who indicated the least amount of contacts with these two groups were included in the low frequency contact group. Roughly the middle half of the sample, who indicated an average number of contacts with the disabled persons and/or education, were omitted from this analysis. Table 17 indicates

TABLE 102.--Summary of hypotheses 3 thru 13 indicating confirmation or non-confirmation
for country samples³

H:3 H:4 H:5 H:6 H:7 H:7c H:8												
High and Low scores for TOTAL	Contact Freq. and Intensity		Contact and Frequency		Leadership		Recognition		Benevolence		Sex	
	HP	P-Ed	T-Ed	HP	P-Ed	T-Ed	HP	P-Ed	T-Ed	HP	P-Ed	T-Ed
Colombia				✓	✓			✓			✓	✓
Peru				✓	✓	✓					✓	✓

H:9 ² H:10 ² H:11 ² H:12 ² H:13 ²												
SER GROUP compared with other Occ groups	High HP		High Benev.		Low Leader.		Low Recog.		High Progress		High Contact	
	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP	HP
Colombia	✓	✓		✓				✓			✓	
Peru		✓									✓	
Col-Peru-Kan	✓			✓								

¹ A check in a given box indicates that the hypothesis was confirmed.

² H:9 - H:13 are labeled in the direction of the hypothesis.

³ This table does not account for possible sex differences. See pages 252-255.

that the mean differences of the high and low contact frequency groups were not significantly different. Apparently intensity was not differentially a function of the number of contacts with either group as far as the instruments used were concerned.

Interpretation at this point becomes extremely difficult and must be considered tentative. A number of indices reported in the literature have indicated that Colombia is one of the most aggressive countries in terms of economic growth in South America. In keeping with Berg's observation reported earlier (page 3), movement in the direction of progressive change apparently has been painful for Colombia. The aggressiveness, which has been an impetus to change and economic growth, has also been expressed in terms of violence which has caused deep national concern. Various agencies concerned with social science research are tackling this problem of violence, which has resulted in a high number of people with permanent disabilities, with a great sense of urgency. It may be that this concern for the disabled has been articulated reasonably well into the national consciousness. If this intuitive "hunch" is accurate, it might account in part for the three sub-samples.

It must be remembered that the bulk of the sample are from the SER and E groups. It seems probable that these groups would be reasonably well informed on the issues involved. Even the L

group, who were probably heavily represented in the low frequency contact group, probably have an awareness of the problem. It must also be remembered that the average age of the L group is slightly less than 18 years as indicated by Table 105 in Appendix A. It is quite probable that a correlation might exist between youth and intensity of feeling for the disabled. Young people, even from the working class, might be expected to be motivated by altruistic causes.

On the other hand, Table 20 indicates a significant negative relationship between intensity HP content scores for the L group. This finding is somewhat contrary to the interpretation just offered in the previous paragraph. However, it might be argued, using the results just cited from Table 20, that young males of the L group would value strength and virileness and tend to reject physical limitations. From this frame of reference, physical disability might be seen as a threat to masculinity.

Tables 18 and 19 indicate there was no significant differences on mean intensity scores on both progressive and traditional attitudes toward education when compared with high and low frequency of contact. However, Table 20 indicates there are significant relationships between content and intensity when viewed correlationally. This is particularly true as far as progressive educational attitudes are concerned. The relationship between

content and intensity is in the predicted direction for both the SER and L group. The intensity scores for the SER group are in a positive direction as far as progressive educational attitudes are concerned. The L group have intensity scores in the negative direction as far as traditional attitudes are concerned while having intensity scores which have a low correlation on progressive educational attitudes.

The E group, on the other hand, have significant positive intensity scores on both progressive and traditional educational attitudes. This finding may have several possible explanations. For example, this group may verbalize democratic progressive ideals and yet cling to a basic traditional orientation without being aware of any discrepancy. It may also be true that those who hold strong progressive educational attitudes and those who hold strong traditional educational attitudes have a similar representation in the sample.

It may also be that the significant correlation between content and intensity on the attitude scales is simply a function of a reasonably large N. Legitimate questions can be raised to the appropriateness of the statistic used. Future studies should attempt to explore, for example, whether this kind of relationship is linear or curvilinear and better analyzed by some other statistical method.

Peru: Tables 21-23 indicate that mean intensity scores between those who indicated high frequency of contact and those who indicated low frequency of contact with both handicapped persons and education were not significantly different. It is interesting to note, however, that in each case the direction was in the reverse direction of the hypothesis.

Felty reported similar finding with reference to attitudes-toward-handicapped-persons. Perhaps his interpretations have relevance here.

One possible interpretation is that within a setting where people are occupationally involved with handicapped persons there is tendency for people to become less favorably disposed toward them as they are more frequently involved with them. A possible theoretical support of this point of view is related to Allport's observations regarding the formation of negative attitudes when contact is with persons who are perceived as being inferior...

Another point of view, however, is that the attitude instrument may be measuring only a limited portion of the attitude universe related to handicapped persons. A number of ATDP items would appear to reflect somewhat stereotyped statements about handicapped persons, so that an individual with a direct and prolonged working relationship with handicapped persons might appear less accepting on a "stereotype" level and have more difficulty responding than someone whose relationships were less frequent and perhaps more superficial (Felty, 1965, p. 170).

The author has experience working in Michigan institutions concerned with mental health. It is his "intuitive feeling" that much of the apparent cynicism among the professional staff is basically an expression of disappointment that patients, to whom

they have a great deal of commitment, but have not benefited more rapidly and effectively from their efforts.

Whether these observations can be generalized to the Peruvian sample in general and to the SER group and the M group in particular is of course an open question. At any rate, it was the author's feeling that the particular SER group, represented by the Peruvian Patronota, had a genuine sense of commitment to the handicapped and operationalized this commitment in stimulating and enthusiastic ways.

It is reasonable to conclude that the respondents indicating high frequency of contact with handicapped persons in Table 21 are from the SER group. Granting this assumption, as well as the assumption that the author's description of the Peruvian SER group is reasonably accurate, Felty's second observation would seem to be applicable.

Contact variables and
their relationship to
favorable attitudes (H:4)

Table 25 indicates a significant correlational relationship between the combined contact variables and favorable attitudes toward handicapped persons in both Colombia and Peru. It is of interest to note that in both countries ease of avoidance contributed most to the relationship. In other words, contact with handi-

capped persons could have been avoided. Perhaps the implications can also be made that a choice to be voluntarily involved with handicapped persons was a factor.

Jordan (1963, 1964) has noted that many of the agencies working with the SER group in Latin America are voluntary in nature and are not directly associated with or controlled by their respective governments. He has further noted that their influence within the country is far greater than the number of workers involved in their agencies would suggest. It may well be that the above finding (suggesting a choice to be voluntarily involved with handicapped persons) is a clue to the apparent success that SER groups are having in bringing into focus the potential of disabled persons.

Table 25 also indicates that a significant relationship exists between progressive educational attitudes toward education and the combined contact variables in both Colombia and Peru. A significant relationship does not exist, however, between the combined contact variables and traditional educational attitudes. Enjoyment of contact when partialled out contributed most to the correlation concerning progressive education attitudes in both countries.

Perhaps it reflects the author's bias to suggest that those who hold progressive attitudes toward a given cause tend to be active in challenging the status quo with reference to that cause

while those holding traditional attitudes toward a given cause emphasize the dangers and risks involved in change as far as the cause or object is concerned. However, it might be argued from this frame of reference that those holding progressive attitudes toward a given cause would tend to derive more satisfaction from issues that they were convinced would bring about social betterment even at the risk of personal sacrifice.

Value variables in
relation to atti-
tudes (H:5-H:7)

As indicated in Chapter 4, no attempt will be made to interpret the findings relative to those scoring high and low on Benevolence value because of the limited number of respondents in the high scoring category. This limitation applies only to the analysis concerned with high and low responses on Benevolence of the total sample in Colombia.

As indicated by Table 102, the only hypothesis supported in Colombia comparing high and low scores on Leadership and Recognition values and attitude scores was the predicted relationship of low scores on Recognition and attitudes-toward-handicapped-persons.

The only hypothesis supported comparing high and low scores on the three value scales and the attitude scales in Peru was the

predicted relationship between high scores on Leadership value and traditional-attitudes-toward-education.

The issue of concept equivalence has been discussed in the previous chapters. The care taken to achieve concept equivalence in this study was also described. The question, however, arises as to how much concept equivalence can be achieved if the concepts involved are not differentially articulated within a culture. For example, in some traditional cultures Benevolence value is viewed within a comparative orientation rather than within the asset orientation of this study.

This problem is further illustrated in Tables 31 and 32. Those in the Peruvian sample who scored high on Leadership value had significantly higher mean scores on both the progressive educational attitude scale and the traditional educational attitude scale.

The issue relating to the reliability and validity of the instruments in this specific setting should also be raised. It must be remembered that the majority of the respondents had never filled out a questionnaire prior to doing so for this study. Having the one-right-answer had also been the focus of educational training for most respondents.

Recommendations will be made in the next section relative to the revision of the instruments which should make a meaningful contribution to the problem of cross-cultural concept equivalence.

Limitations resulting from a failure to obtain the desired number of respondents from each occupational group in Colombia and Peru have already been described. Beyond this, however, cautions in interpretations are necessary because of the uneven number of male and female respondents within the occupational categories. In Colombia the majority of male and female respondents were female while the majority of the respondents from Peru were male.

As predicted, females had significantly higher mean scores than males on Benevolence value in both Colombia and Peru. Men also had higher (more negative) HP scores in Colombia which was also predicted.

Contrary to Felty's (1965) findings, there was very little difference in terms of means scores between men and women on progressive attitudes toward education although the minor differences were in the predicted direction.

Attitude scores as related
to change variables (H:8
and H:12)

Felty (1965) suggested that attitudes toward change might have a salient relationship to attitudes toward education and toward the disabled and recommended change-oriented-items to be included in the study. As seen from Table 47, there was a significant relationship between HP attitudes and change oriented

items in Peru and progressive-educational-attitudes and change oriented items in Colombia. While not significant, there was a relatively high relationship between progressive-educational-attitudes and change oriented items in Peru.

Colombia: Table 48 reveals that the combined change variables had little differential predictive power related to HP attitudes or traditional-attitudes-toward-education in Colombia. Change orientation items involving child rearing practices and automation items, however, made a significant positive contribution to the multiple correlation between the combined change orientation items and progressive-educational-attitudes. The political leadership change item, when partialled out, made a significant negative contribution to the correlation with progressive educational attitudes.

The political leadership response might be explained in terms of the unique Colombian political system described on page 68. A change from this system might be seen as a return to a traditional and outmoded method which they feel they have essentially outgrown.

The positive contribution of the automation item can probably be interpreted in terms of what was said earlier about the economic growth of Colombia. Lindow (1964) reports that one of

the most dynamic factors in the Colombian economy is the manufacturing sector.

The item referring to child rearing practices made the largest differential contribution to the multiple correlation. It must be remembered that the Colombian sample is largely composed of SER workers and teachers. It is this group that probably would have the greatest opportunity to be exposed to a liberal philosophy about child rearing practices.

Table 8 gives the results of the mean differences between the occupational groups on four of the change variables. There are differences on all four variables significant at the .005 level of confidence. Tables 82-84, however, reveal that the SER group and the E group are not significantly different from each other on any of the four variables but both groups are significantly different from the L group on all of the four variables. It would, therefore, seem logical to assume that the SER respondents and the E respondents make approximately equal contributions to the partial correlation in Table 48.

It is somewhat surprising to find so little differential contribution to the multiple correlations on items involving health practices and birth control practices on the attitude scales in Table 48.

Peru: Table 85 indicates that the M group had the highest mean scores on three of the change variables, however, none of these differences were considered statistically significant. The SER group had a mean score significantly different from the other groups on the items refering to child rearing practices.¹

The finding is particularly difficult to interpret. One might wonder how much the M group, who were in a special training program for executives, were influenced by their supervisors from the United States, or for that matter, how representative this sample of executives are of the Peruvian executive in general.

Table 48 indicates that the item refering to child rearing practices made a significant contribution to the relationship with progressive educational attitudes. However, it is also interesting to note there was little correlation between HP attitudes and child rearing practices. The contradictory finding between HP scale scores and self change scores and between progressive-attitude-toward-education scale scores and self change scores are equally hard to explain. Perhaps Rosenberg's (1960) observation that strength of attitude is related to how clearly a value has been assimilated or articulated may have relevance here.

¹ No attempt will be made to interpret the mean differences of the E and L groups with the SER or M groups because of the sampling problems described earlier on page 72.

One might speculate that these kinds of discrepancies are a result of conflicting loyalties between the old and the new; the traditional and the progressive. It must be remembered that Peru has been described as a traditional country. Changes are often painful. This was dramatized by the fact that several items relating to change had to be omitted from the questionnaire because they were considered too sensitive to be included.

Discussion of group differences on value scores and attitudes scores in Colombia and Peru, and the SER groups in Colombia, Peru, and Kansas (H:9-H:11)

Colombia: Table 102 reveals that the hypotheses concerning the SER group with reference to scores on the HP attitude scale and the value scales were all confirmed with one exception. The SER group had the lowest score on Leadership value but these differences, while in the direction of the hypotheses, were not statistically significant.

On the other hand, the hypothesis concerning scores on the educational scales were not confirmed. However, the SER group did have the highest scores on the progressive educational scale and the lowest score on the traditional educational scale. These differences, while in the predicted direction, were not significant.

The zero-order correlations found in Table 49 and 50 are not clear-cut in terms of the results although they are generally in the hypothesized direction. These results are summarized on pages 160-161.

Tables 54 and 60 indicate that the mean differences between the SER group and the E group are significantly different on HP attitudes scores and Benevolence scores. These findings do not entirely support the observations made earlier that apparently little value differences exist between the SER group and the E group in Colombia.

Table 62, however, indicates that while significant mean differences on Recognition scores do exist between the SER and the L groups, as well as between the E group and the L group, the differences between the SER group and the E group are not significantly different.

While these results tend to confirm for Colombia some of the assumptions concerning the value structure of the occupational groups, the results of hypotheses 5-7, which look at the relationship between attitude and value, are somewhat harder to interpret.

A recommendation concerning facet theory, which appears in the next section, will speak to this problem.

Peru: Table 55 indicates that significant differences do exist among the occupational groups on HP scale scores. However, since no attempt is made to draw inferences for the L or E group in Peru, these differences must be questioned. Table 56 (Appendix A) indicates that while the mean differences between the SER group are in the predicted direction they are not significantly different from each other.

The SER group, on the other hand, has value scores which are in the predicted direction. All of these differences were significant with the exception of scores relating to Recognition value.

The SER group had higher mean scores on both the traditional and progressive educational attitude scale, however, both of these scores were not significantly different from the other groups.

The value scale scores were better predicted as hypothesized than were the attitude scale scores for the Peruvian sample as far as the SER group is concerned.

As suggested by the theoretical model of the study, cultures that have a history of traditionalism, but are in the process of change, can be expected to express ambivalent attitudes toward progressive attitudes such as asset attitudes toward handicapped persons and progressive educational attitudes. It can be speculated that a clear-cut value system that spawns these kinds of attitudes has not yet evolved in Peru.

It should be remembered, however, that the Kerlinger education scales, which were used as a measure for progressive and traditional educational attitudes, were normalized on a U.S. college population. The Yuker "Attitudes Toward Disabled Persons Scale", used as a measure for attitudes toward handicapped persons, was normalized on a New York light manufacturing company which employs disabled workers. The validity of these instruments as a measure of HP attitudes and educational attitudes in South America is of course open to question.

Colombia, which could be said to be relatively closer than Peru on the progressive-traditional-cultural-continuum to the United States, is faced with the problem of violence described earlier. Hess (1963) reports there has been little action at the government level as far as rehabilitation has been concerned. Nonetheless, it can be hypothesized that the disabilities resulting from mass violence has caused deep concern and awareness that something must be done. It seems reasonable to predict that a number of private agencies will be created as well as increasing government involvement in this major problem area.

The major SER group in Peru, known as the Patronota, is a very young organization with a promising future. While they have done an excellent job, they are just beginning to see the results of their efforts. Time will be needed to translate their concerns into the national consciousness.

The issue of cross-cultural comparability needs to be raised as far as both the attitude and value instruments are concerned. Does a score in one culture mean the same thing as a score in another culture? How is the psychological zero point separating favorable and unfavorable responses to a given item determined? The implications of content and intensity scaling, which have been adequately discussed elsewhere (pp. 51-56), are cogent issues here. Interpretations are considerably less potent as a result of lack of scaling as far as the responses of the attitude instruments are concerned.

Facet design, which should make a real contribution to cross-cultural analysis, will be discussed in the next major section.

Cross National SER Comparisons: The Kansas SER sample was added to the study for primarily two reasons. Samples from two occupational groups in Peru and one occupational group in Colombia were not collected as a result of technical problems beyond the researcher's control. Candidly, another comparison was needed to satisfy the requirements of an acceptable doctoral research experience. Beyond this, however, was the unique opportunity to compare three SER occupational groups from countries that are supposedly on different points of the progressive-traditional-cultural-continuum.

Table 102 reveals that the hypothesis relating to higher HP mean scores and lower Leadership value mean scores for the Kansas sample was confirmed. The Kansas sample scored lower on Benevolence value than did the Colombian SER sample. Both the Colombian and Peruvian SER group had lower mean scores on Recognition value than did the Kansas sample. The last two reported results, of course, are not in the hypothesized direction.

The Kansas sample's higher score on the progressive-educational-attitudes was nearly significant, however, there were little mean differences between the countries on the traditional educational scale scores.

The results comparing HP attitudes are particularly interesting. The order of mean score differences is in harmony with the hypothesis (Table 58, Appendix A). Perhaps some of the following observations have relevance with reference to the higher scores by the Kansas sample.

Several U.S. presidents have initiated major legislation that has been concerned with the SER groups within the United States. Economic returns as well as humanitarian ideals were motivating factors in these actions. A great deal of energy has been devoted to articulating this concern through the mass media. Major centers have been established at a number of U.S. universities for the training of SER workers. Labor unions as well as industry are showing increasing concern for and toward the disabled.

SER contact with mentally
retarded and emotionally
disturbed persons (H:13)

As indicated by Tables 87-89, the SER group had significantly more contact with the mentally retarded and emotionally disturbed persons than did either the E or L group in Colombia. The SER group in Peru also had significantly more contact with mentally retarded and emotionally disturbed persons than did the M group (Tables 90-92). The results so clearly support the hypothesis that further interpretation would seem redundant.

Part III: Recommendations

Recommendations relating
to the instruments

One of the probable reasons that scaling (see H:1, H:2) was not successful in this study is related to the complexity of attitude composition. Attitudes are usually multidimensional rather than unidimensional in nature. Guttman's facet theory (1959, 1961) suggests that the attitude universe represented by the item content can be substructured into components which are systematically related according to the number of identical conceptual elements they hold in common. The substructuring of a universe into components facilitates a sampling of items within each of the derived components, and also enables the prediction of relation-

ships between various components of the attitude universe. It should also provide a set of clearly defined component areas for cross-national comparisons.

In an analysis of research by Basthide and van den Berghe (1957), Guttman (1959) has proposed that in respect to intergroup behavior there are three necessary facets¹ which may be combined according to definite procedures to determine the component structure of the attitude universe:

<u>Facets</u>			
Elements	A. <u>Subject's Behavior</u>	B. <u>Referent</u>	C. <u>Referent's Inter-group Behavior</u>
	a ₁ belief	b ₁ subject's group	c ₁ comparative
	a ₂ overt action	b ₂ subject himself	c ₂ interaction

Fig. 1.--Basic facets used to determine component structure of attitude universe.

One element from each facet must be represented in any given statement, and these statements can be grouped into components of the attitude universe by a multiplication of the facets A x B x C, yielding 2 x 2 x 2 combination of elements or 8 semantic components in all; e.g., (1) a₁ b₁ c₁, (2) a₁ b₁ c₂ ... (8) a₂ b₂ c₂.

¹ The term facet was proposed by Guttman as a less ambiguous substitute for Fisher's "factor". He has defined it as "a set that is a component of a Cartesian product". (Proceedings of the 15th International Congress of Psychology, Brussels, 1957).

It can be seen that components (1) and (2) have 2 elements in common (a_1 b_1) and one different (c_1 and c_2), whereas components (1) and (8) have no elements in common. Contiguity theory predicts that responses to questions in component (1) will be more similar to component (2) than they will be to component (8) because they have more identical elements. This closer similarity should be reflected in a higher correlational relationship between the components. This predicted relationship has been obtained in various studies of intergroup behavior (Foa, 1958, 1963; Guttman, 1959, 1961). An analysis of intergroup behavior possibilities suggest that the facets proposed by Guttman could be expanded. A more inclusive set of facets and their elements could be stated as follows:

Elements	A. <u>Subject's Behavior</u>	B. <u>Psychological Level</u>	C. <u>Concrete-ness</u>	D. <u>Referent</u>
	a_1 belief	b_1 rational	c_1 symbolic	d_1 other
	a_2 overt action	b_2 affective	c_2 operational	d_2 interactive
	E. <u>Referent's Intergroup Behavior</u>			
	e_1 comparative			
	e_2 interactive			

Fig. 2.--Extension of facets used in Fig. 1 to determine component structure of attitude universe.

The multiplication of facets ABCDE yields a possible 32 combinations of elements at six levels of multiple strength.¹ Six of these components seem particularly fruitful, and represent each of the levels of attitude strength. Figure 3 shows levels of attitude "strength", the element composition of the selected components, and a tentative descriptive term for each component. Each successive level changes elements so that the components have a simplex ordering (Guttman, 1954a).

<u>Levels</u>	<u>Component Composition</u>	<u>Descriptive Term</u>
I	a ₁ b ₁ c ₁ d ₁ e ₁	Stereotype.
II	a ₁ b ₁ c ₁ d ₁ e ₂	Normative behavior.
III	a ₁ b ₁ c ₁ d ₂ e ₂	Moral evaluation ("right" role behavior).
IV	a ₁ b ₁ c ₂ d ₂ e ₂	Hypothetical role behavior (social interaction).
V	a ₁ b ₂ c ₂ d ₂ e ₂	Actual feelings.
VI	a ₂ b ₂ c ₂ d ₂ e ₂	Actual behavior (social interaction).

Fig. 3.--Levels, component composition, and component labels for a six-component universe of intergroup attitudes.

¹ i.e., the more subscript "2" elements a component contains, the greater the "strength" of the attitude. It should also be noted that because of semantic contradictions not all combinations are logical. The selection of a "best" set of components from the 312 possible is still partly a matter of judgment.

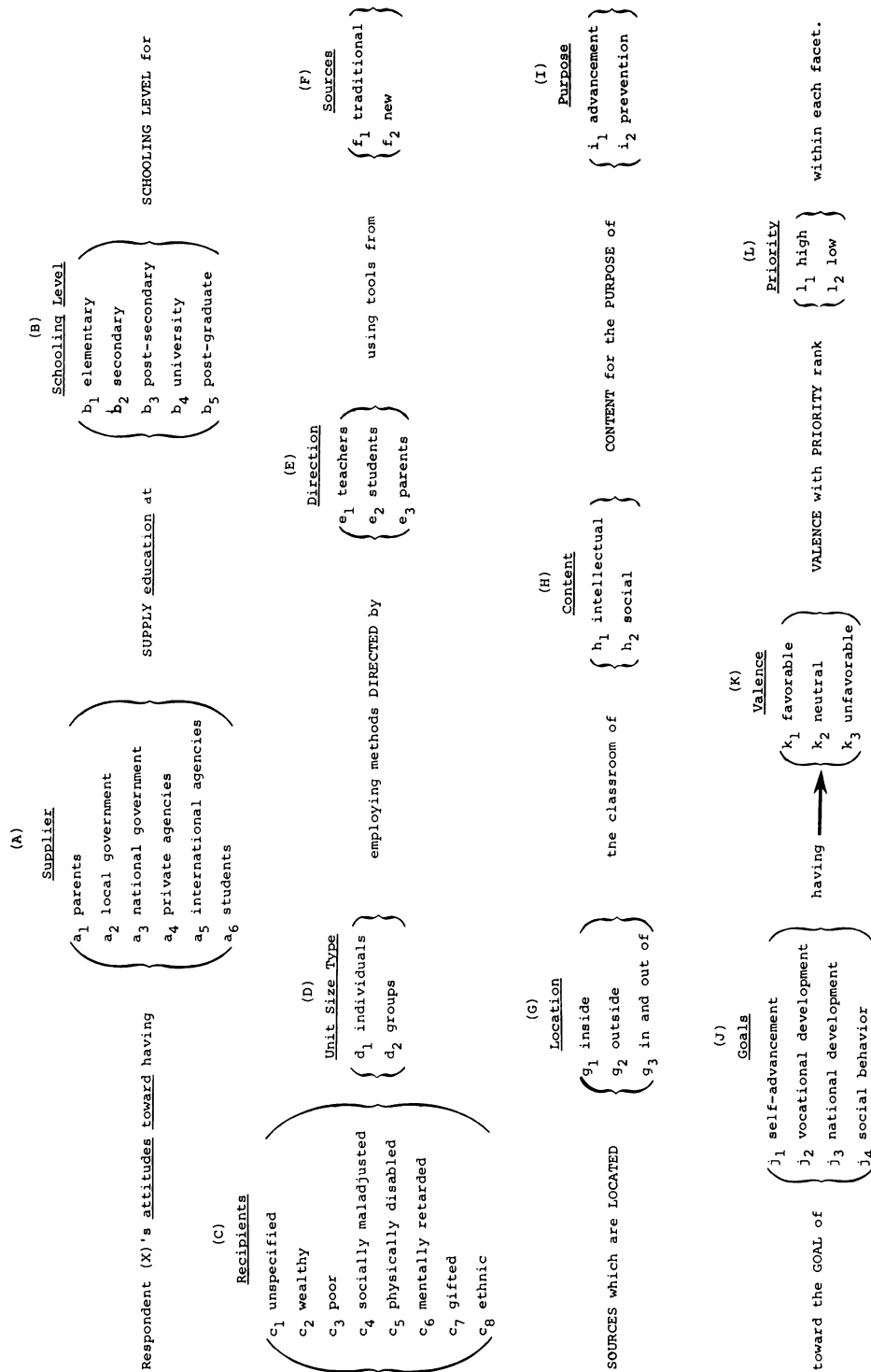
Given the contiguity theory, and the contiguity hypothesis of Foa and Guttman, it is possible to construct a hypothetical correlation matrix to illustrate the anticipated simplex correlation structure among these components. It is assumed for convenience that a maximum r between two components is in the nature of .60, with four elements in common. As the number of common elements between two components decrease, the correlations between the components also decrease in size.

	I	II	III	IV	V
I					
II	.60				
III	.50	.60			
IV	.40	.50	.60		
V	.30	.40	.50	.60	
VI	.20	.30	.40	.50	.60

Fig. 4.--Hypothetical correlation matrix illustrating expected simplex ordering.

Figure 5

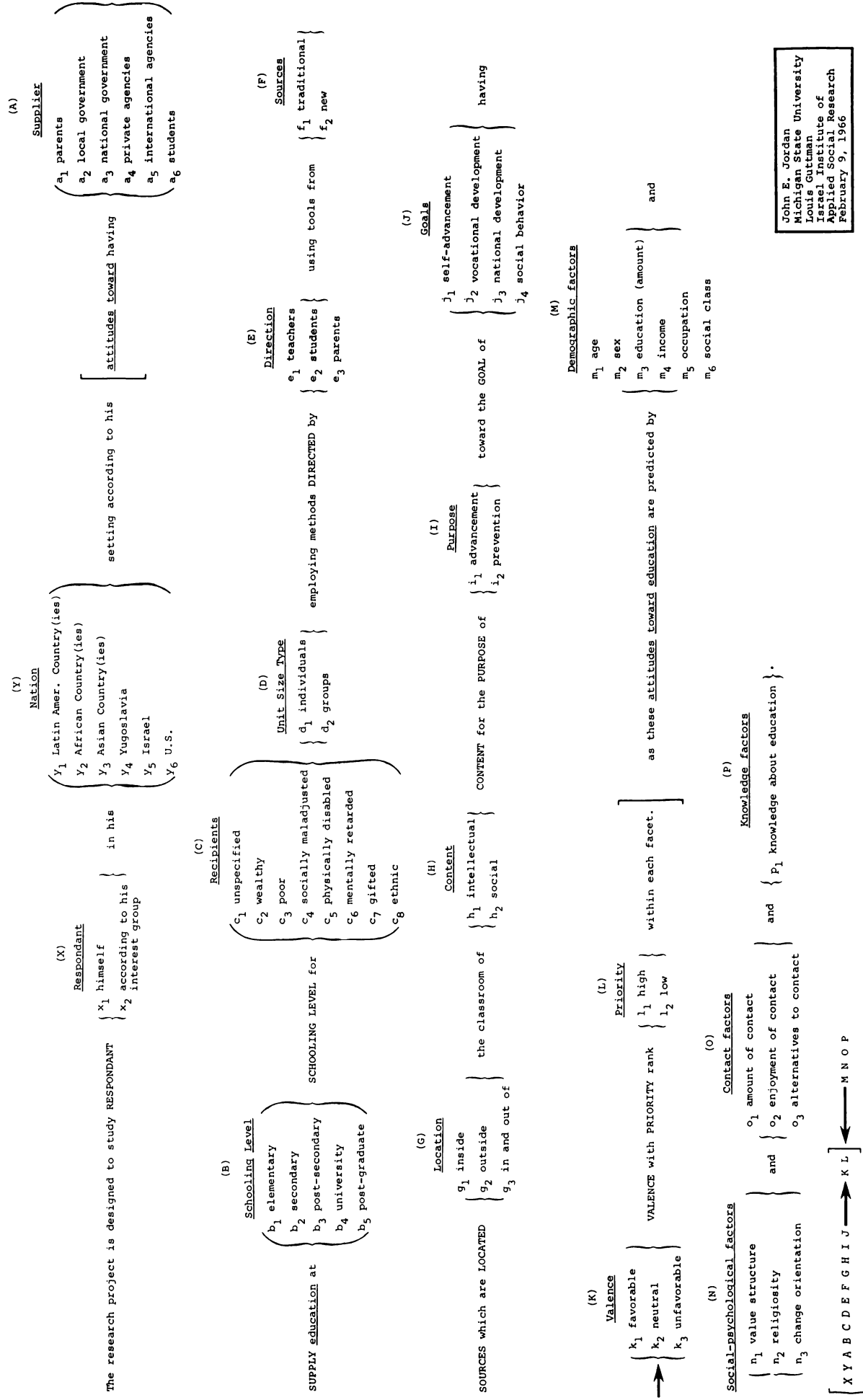
A MAPPING SENTENCE FOR THE FACET ANALYSIS OF ATTITUDES TOWARD EDUCATION



John E. Jordan
Michigan State University
Louis Guttman
Israel Institute of
Applied Social Research
February 9, 1966

Figure 6

A MAPPING SENTENCE FOR THE FACET ANALYSIS OF A RESEARCH PROJECT ON CROSS CULTURAL ATTITUDES TOWARD EDUCATION



The author spent a number of hours discussing with Drs. Guttman and Jordan the problem of question selection within each component. A mapping sentence was devised for the major instruments of the study. Figure 5 represents the latest revision of a mapping sentence designed to construct an attitude-toward-education-scale based on facet analysis. This revision was worked out by Drs. Guttman and Jordan at the Israel Institute of Applied Social Research in February 1966.

Figure 6 is a mapping sentence using facet analysis as it is related to the larger multi-nation attitude study under the direction of Dr. John E. Jordan of Michigan State University. Note that the mapping sentence of Figure 5 is inserted between facet Y and facet M of Figure 6.

Facet analysis should also have an important bearing on the length of the instruments. It was the author's feeling that the instruments in their current form are much too long. The average time required to complete the six questionnaires was about two hours for the Latin American sample. This length of time of course raises the usual questions concerning reliability and validity.

The author noted that some of the questions seemed to be somewhat complex for the Latin American respondents. Part of this complexity was undoubtedly related to anxiety resulting

from their first encounter with a questionnaire. However, some of the questions undoubtedly could have been stated more simply. Questions derived from the application of facet analysis could well serve this function.

Recommendations relating to the sample

A rationale for not attempting to get a representative sample for this study was given in Chapter 3. This research effort was considered to be exploratory to the larger international study.

It is recommended that an effort be made to obtain a representative sample in the next phase of the study. This will necessitate a departure from the group administration procedures used until now. Thus far, only respondents with the minimum equivalent of a 4th grade education have been a part of the sample. Future efforts should also be directed to ascertaining the nature and determinants of attitudes toward education and physical disability of the illiterate sectors of the national population.

Efforts should also be made to assess attitudes of other major occupational groups. Newspaper headlines, for example, attest to the importance of the military in directing the affairs of underdeveloped countries. A study of this group could have far reaching implications in terms of development.

A manager (M) group was included in this study. It would also be of interest and concern to learn something about the attitudes of labor unions and their role in social change. Universities, students, and professors should also provide fertile respondent groups for attitude studies, particularly attitudes toward education.

Recommendations relating to analysis procedures

Several places throughout the dissertation the recommendation was made to use the Guttman Lingoes's MSA-I computer program. This procedure allows for multidimensional analysis of data in addition to multi-unidimensional analyses. The Guttman-Lingoes Small Space Analysis computer program appears to offer real promise in terms of cross cultural analysis.

Further studies should examine the linear vs curiealinear nature of proposed correlational relationships. The use of contingency tables, chi square, and plotting procedures for exhibiting actual data "curves" are also additional analysis methods that should be explored.

Finally, the possible use of factor analysis should be explored as recommended by Felty (1956, p. 220). In particular it is recommended that "factor-score" or "factor-measurement" products be used in multiple regression analyses as a possible

means of reducing the large number of predictor variables to a more "manageable" size.

Concluding Summary

This section will discuss two major aspects: (a) the relationship of the sex linked nature of the occupational groups and (b) the relationship between theory and the findings of the study.

Sex and Occupational Group Interaction

Tables 98-101 compare total sample differences between males and females on the value and attitude scales for Colombia and Peru. As indicated by Table 98, females had significantly higher Benevolence value scores and significantly lower scores on Recognition value than did their male counterparts. The differences were not significant for the Leadership value.

Table 99 indicates that females had higher Benevolence value scores and significantly lower Leadership value scores than did the males in Peru. Table 100 indicates that females had significantly lower (more favorable) HP scores than did the males in Colombia. There were no significant differences between sexes on the educational scales. Table 101 indicates that there

were no significant female-male differences on any of the attitude scales in Peru.

Table 102 indicates that where values and attitudes (H:5-H:7) were compared, the hypotheses were not generally supported in either Colombia or Peru.

Sex differences, however, may have been a factor when the SER group was compared with other occupational groups on value scales (H:10). The Colombian sample was weighted in favor of female respondents. The SER sample in Peru was weighted in favor of male respondents giving additional credence to the fact that the SER as an occupational group is different from the M group since the M group is also largely composed of males.

Tables 20 and 24 show the zero-order correlations between content and intensity on the attitude scales for male, female, and total. The females in the SER group in Colombia tend to express more intense progressive and less traditional attitudes toward education. On the other hand the females in the SER group in Peru tended to express more intense traditional and less progressive attitudes toward education than did their male counterparts.


Future studies should employ a design which allows analysis of possible interaction effects of occupational groups and sex. A two-way analysis of variance design would be appropriate.

Relationship Between Theory and Results

As evidenced in Table 102, there was a significant relationship between contact and HP scores as well as between contact and progressive attitudes toward education in both Colombia and Peru. Zetterberg (1963, p. 13) has indicated that the volitional nature of contact is crucial. In both Colombia and Peru, avoidance of contact contributed most to the multiple correlation between the combined contact variables (alternative rewarding opportunities, enjoyment of contact, avoidance of contact, amount of contact) and HP attitudes. In other words, although the contact would have been avoided the respondents had chosen to interact with handicapped persons.

In keeping with the theoretical position of Zetterberg, enjoyment of contact contributed most to the multiple correlation between progressive attitudes toward education and the combined contact variables in both Colombia and Peru.

Table 102 also indicates that group membership may be an important variable as far as the hypothesis relating to value scales of the study are concerned. This finding is generally in keeping with the theoretical position of Kerlinger (1958) which posits a relationship between attitudes and group membership. More specifically, the SER group tended to have higher asset



value orientation and a lower comparative value orientation than other occupational groups in both Colombia and Peru. This finding is in keeping with Jordan's (1964) theoretical position concerning characteristics of the SER group in Latin America.

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APPENDIX A

Statistical Material

1. Duncan's New Multiple Range Test Tables
2. Means, Standard Deviations, and Number of Respondents for 68 Variables for the Total Sample, Males and Females by Occupational Groups and Countries

APPENDIX A

A-1 Duncan's New Multiple
Range Test Tables



TABLE 9.--Duncan's New Multiple Range Test applied to means of education scores for four occupational categories in Peru.

Range of Mean (p)	2	3	4	d.f. 119
Studentized ranges for 5% test (z_p) ¹	2.80	2.95	3.05	
R'_p ($R' = sz_p$, 119) ²	4.06	4.28	4.42	
Mean differences ³				
$\bar{X}_M - \bar{X}_L$ (p4)			14.26*	
$\bar{X}_M - \bar{X}_R$ (p3)		6.75*		
$\bar{X}_E - \bar{X}_L$ (p3)		11.25*		
$\bar{X}_M - \bar{X}_E$ (p2)	1.04			
$\bar{X}_E - \bar{X}_R$ (p2)	4.17*			
$\bar{X}_R - \bar{X}_L$ (p2)	5.50*			

¹ Taken from Edwards (1960, p. 373).

² The square root mean square of the analysis of variance of Table 8

$$s = \sqrt{1.344} = 1.16$$

p the range of means (2 and 3)

³ Mean differences of columns 2 and 3 have been transformed into the equivalent of z -scores for multiple means. To be significant, the figure must exceed the R'_p value of the same column. The formula given by Kramer (1956) is:

$$(\bar{X}_y - \bar{X}_z) \sqrt{\frac{2n_y n_z}{n_y + n_z}} > sz_p, \text{ error d.f. of A. of V.} \\ \quad \quad \quad (z R'_p)$$

⁴ In all Duncan tables the subscript R will be used for the SER group due to space limitations.

* This level of confidence will be used on all Duncan's Multiple Range Tests. $P < .05$.

TABLE 10.--Duncan's New Multiple Range Test¹ applied to means of age scores for four occupational categories in Peru.

Range of Mean (p)	2	3	4	d.f. 110
Studentized ranges for 5% test (Zp)	2.80	2.95	3.05	
R'p (R'=sz _p 110)	20.35	21.45	22.17	
Mean differences				
$\bar{X}_E - \bar{X}_R$ (p4)			23.64	
$\bar{X}_E - \bar{X}_L$ (p3)		4.82		
$\bar{X}_M - \bar{X}_R$ (p3)		30.67*		
$\bar{X}_E - \bar{X}_M$ (p2)	2.62			
$\bar{X}_M - \bar{X}_L$ (p2)	3.60			
$\bar{X}_L - \bar{X}_R$ (p2)	13.85			

$$s = \sqrt{52.768} = 7.27$$

TABLE 13.--Duncan's New Multiple Range Test¹ analysis of education for respondents working in the area of SER in Colombia, Peru, and Kansas.

Range of Mean (p)	2	3	d.f. 200
Studentized ranges for 5% test (Zp)	2.72	2.92	
R'p (R'=sz _p 200)	3.43	3.67	
Mean differences			
$\bar{X}_K - \bar{X}_P$ (p3)		1.48*	
$\bar{X}_K - \bar{X}_C$ (p2)	11.35*		
$\bar{X}_C - \bar{X}_P$ (p2)	3.67*		

¹ See Table 4, p. 115 for full explanation.

* p < .05

$$s = \sqrt{1.654} = 1.26$$

TABLE 14.--Duncan's New Multiple Range Test¹ analysis of age for respondents working in the area of SER in Colombia, Peru, and Kansas.

Range of Mean (p)	2	3	d.f. 197
Studentized ranges for 5% test (Zp)	2.72	2.92	
R'p (R'=sz _p 197)	27.39	29.40	
Mean differences			
$\bar{X}_K - \bar{X}_P$ (p3)		61.47*	
$\bar{X}_K - \bar{X}_C$ (p2)	67.11*		
$\bar{X}_C - \bar{X}_P$ (p2)	18.85		
$s = \sqrt{101.435} = 10.07$			

TABLE 54.--Duncan's New Multiple Range Test¹ applied to means of attitude-toward-disabled-persons scores for three occupational categories in Colombia.

Range of Mean (p)	2	3	d.f. 211
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'p (R'=sz _p 211)	19.47	20.53	
Mean differences			
$\bar{X}_L - \bar{X}_R$ (p3)		43.12*	
$\bar{X}_E - \bar{X}_R$ (p2)	34.40*		
$\bar{X}_L - \bar{X}_E$ (p2)	17.61		

¹ See Table 4, p. 115 for full explanation.

* p < .05

$$s = \sqrt{49.394} = 7.03$$

TABLE 56.--Duncan's New Multiple Range Test¹ applied to means of attitude-toward-disabled-persons scores for four occupational categories in Peru.

Range of Mean (p)	2	3	4	d.f. 116
Studentized ranges for 5% test (Zp)	2.83	2.98	3.07	
R'p (R' szp116)	19.05	20.05	20.66	
Mean differences				
$\bar{X}_L - \bar{X}_M$ (p4)			20.26	
$\bar{X}_L - \bar{X}_E$ (p3)		6.36		
$\bar{X}_R - \bar{X}_M$ (p3)		15.76		
$\bar{X}_L - \bar{X}_R$ (p2)	10.14			
$\bar{X}_E - \bar{X}_M$ (p2)	12.51			
$\bar{X}_R - \bar{X}_M$ (p2)	.94			

$$s = \sqrt{45.257} = 6.73$$

TABLE 58.--Duncan's New Multiple Range Test¹ applied to means of attitude-toward-disabled-persons scores for respondents working in the area of SER in Colombia, Peru, and Kansas.

Range of Mean (p)	2	3	d.f. 192
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'p (R' szp192)	17.174	18.004	
Mean differences			
$\bar{X}_P - \bar{X}_K$ (p3)		41.201*	
$\bar{X}_P - \bar{X}_C$ (p2)	21.90*		
$\bar{X}_C - \bar{X}_K$ (p2)	30.503*		

¹ See Table 4, p. 115 for full explanation.

* p < .05

$$s = \sqrt{38.5} = 6.2$$

TABLE 60.--Duncan's New Multiple Range Test¹ applied to means of Benevolence scores for three occupational categories in Colombia.

Range of Mean (p)	2	3	d.f. 214
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'_p ($R' = sz_p 214$)	12.58	13.26	
Mean differences			
$\bar{X}_R - \bar{X}_L$ (p3)		20.92*	
$\bar{X}_R - \bar{X}_E$ (p2)	15.45*		
$\bar{X}_E - \bar{X}_L$ (p2)	9.98		

$$s = \sqrt{20.742} = 4.54$$

TABLE 62.--Duncan's New Multiple Range Test¹ applied to means of Recognition scores for three occupational categories in Colombia.

Range of Mean (p)	2	3	d.f. 214
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'_p ($R' = sz_p 214$)	9.058	9.558	
Mean differences			
$\bar{X}_L - \bar{X}_R$ (p3)		23.226*	
$\bar{X}_L - \bar{X}_E$ (p2)	16.302*		
$\bar{X}_E - \bar{X}_R$ (p2)	.234		

¹ See Table 4, p. 115 for full explanation.

* $p < .05$

$$s = \sqrt{10.718} = 3.27$$

TABLE 65.--Duncan's New Multiple Range Test¹ applied to means of Benevolence value scores for the four occupational categories in Peru.

Range of Mean (p)	2	3	4	d.f. 112
Studentized ranges for 5% test (Z_p)	2.80	2.95	3.05	
R'_p ($R' = s z_{p 112}$)	13.23	13.92	14.43	
Mean differences				
$\bar{X}_R - \bar{X}_L$ (p4)			23.40*	
$\bar{X}_R - \bar{X}_M$ (p3)		14.72*		
$\bar{X}_E - \bar{X}_L$ (p3)		16.94*		
$\bar{X}_E - \bar{X}_M$ (p2)	2.71			
$\bar{X}_R - \bar{X}_E$ (p2)	7.97			
$\bar{X}_M - \bar{X}_L$ (p2)	16.32*			

¹ See Table 4, p. 115 for full explanation

* $p < .05$

$$s = \sqrt{22.357} = 4.73$$

TABLE 68.--Duncan's New Multiple Range Test¹ applied to means of Leadership value scores for the four occupational groups in Peru.

Range of Means (p)	2	3	4	d.f. 109
Studentized ranges for 5% test (Zp)	2.80	2.95	3.05	
R_p ($R = sz_p 109$)	16.912	17.918	18.422	
Mean differences				
$\bar{X}_M - \bar{X}_L$ (p4)			17.523	
$\bar{X}_M - \bar{X}_R$ (p3)		25.152*		
$\bar{X}_E - \bar{X}_L$ (p3)		8.343		
$\bar{X}_M - \bar{X}_E$ (p2)	11.08			
$\bar{X}_E - \bar{X}_R$ (p2)	11.348			
$\bar{X}_R - \bar{X}_L$ (p2)	.498			

$$s = \sqrt{36.331} = 6.04$$

TABLE 70.--Duncan's New Multiple Range Test¹ applied to means of Benevolence value scores for respondents in the area of SER in Colombia, Peru, and Kansas.

Range of Mean (p)	2	3	d.f. 187
Studentized ranges for 5% test (Zp)	2.77	2.92	
R_p ($R = sz_p 187$)	14.62	14.71	
Mean differences			
$\bar{X}_C - \bar{X}_P$ (p3)		14.27*	
$\bar{X}_C - \bar{X}_K$ (p2)	13.69		
$\bar{X}_K - \bar{X}_P$ (p2)	4.70		

¹ See Table 4, p. 115 for full explanation.

* $p < .05$

$$s = \sqrt{22.407} = 4.73$$

TABLE 72.--Duncan's New Multiple Range Test¹ applied to means of Recognition value scores for respondents in the area of SER in Colombia, Peru, and Kansas.

Range of Mean (p)	2	3	d.f. 187
Studentized ranges for 5% test (Zp)	2.77	2.92	
R' _p (R'=sz _p 187)	10.33	10.89	
Mean differences			
$\bar{X}_K - \bar{X}_C$ (p3)		27.12*	
$\bar{X}_K - \bar{X}_P$ (p2)	12.35*		
$\bar{X}_P - \bar{X}_C$ (p2)	8.16		

$$s = \sqrt{13.939} = 3.73$$

TABLE 74.--Duncan's New Multiple Range Test¹ applied to means of Leadership value scores for respondents in the area of SER in Colombia, Peru, and Kansas.

Range of Mean (p)	2	3	d.f. 182
Studentized ranges for 5% test (Zp)	2.77	2.92	
R' _p (R'=sz _p 182)	14.62	14.71	
Mean differences			
$\bar{X}_C - \bar{X}_K$ (p3)		30.74*	
$\bar{X}_C - \bar{X}_P$ (p2)	4.57		
$\bar{X}_P - \bar{X}_K$ (p2)	18.91*		

¹ See Table 4, p. 115 for full explanation.

* p < .05

$$s = \sqrt{28.899} = 5.28$$

TABLE 82.--Duncan's New Multiple Range Test¹ applied to child rearing practices for three occupational groups in Colombia.

Range of Mean (p)	2	3	d.f. 235
Studentized ranges for 5% test (Z_p)	2.77	2.92	
R'_p ($R' = s z_{p235}$)	2.47	2.60	
Mean differences			
$\bar{X}_R - \bar{X}_L$ (p3)		7.59*	
$\bar{X}_R - \bar{X}_E$ (p2)	.46		
$\bar{X}_E - \bar{X}_L$ (p2)	3.76*		

$$s = \sqrt{.795} = .89$$

TABLE 83.--Duncan's New Multiple Range Test¹ applied to the the health practice variable for three occupational groups in Colombia.

Range of Mean (p)	2	3	d.f. 235
Studentized ranges for 5% test (Z_p)	2.77	2.92	
R'_p ($R' = s z_{p235}$)	2.08	2.19	
Mean differences			
$\bar{X}_E - \bar{X}_L$ (p3)		5.41*	
$\bar{X}_E - \bar{X}_R$ (p2)	.46		
$\bar{X}_R - \bar{X}_L$ (p2)	3.91*		

¹ See Table 4, p. 115 for full explanation.

* $p < .05$

$$s = \sqrt{.565} = .75$$



TABLE 84.--Duncan's New Multiple Range Test¹ applied to automation mean scores for three occupational groups in Colombia.

Range of Mean (p)	2	3	d.f. 232
Studentized ranges for 5% test (Zp)	2.77	2.92	
R' p (R'=sz _{p232})	2.24	2.47	
Mean differences			
$\bar{X}_E - \bar{X}_L$ (p3)		3.96*	
$\bar{X}_E - \bar{X}_R$ (p2)	1.40		
$\bar{X}_R - \bar{X}_L$ (p2)	2.50*		

$$s = \sqrt{.661} = .81$$

TABLE 86.--Duncan's New Multiple Range Test¹ applied to child rearing practices for three occupational groups in Peru.

Range of Mean (p)	2	3	4	d.f. 118
Studentized ranges for 5% test (Zp)	2.80	2.95	3.05	
R' p (R'=sz _{p118})				
Mean differences				
$\bar{X}_M - \bar{X}_L$ (p4)			2.71	
$\bar{X}_M - \bar{X}_R$ (p3)		2.79		
$\bar{X}_E - \bar{X}_L$ (p3)		1.75		
$\bar{X}_M - \bar{X}_E$ (p2)	1.19			
$\bar{X}_E - \bar{X}_R$ (p2)	.99			
$\bar{X}_R - \bar{X}_L$ (p2)	1.12			

¹ See Table 4, p. 115 for full explanation.

* p < .05

$$s = \sqrt{.754} = .87$$

TABLE 88.--Duncan's New Multiple Range Test¹ applied to amount of contact with mentally retarded persons for four occupational groups in Colombia.

Range of Mean (p)	2	3	d.f. 210
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'p (R'=sz _p 210)	4.65	4.91	
Mean differences			
$\bar{X}_R - \bar{X}_L$ (p3)		9.91*	
$\bar{X}_R - \bar{X}_E$ (p2)	7.78*		
$\bar{X}_E - \bar{X}_L$ (p2)	2.48		

$$s = \sqrt{1.46} = 1.68$$

TABLE 89.--Duncan's New Multiple Range Test¹ applied to amount of contact with emotionally disturbed persons for four occupation groups in Colombia.

Range of Mean (p)	2	3	d.f. 189
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'p (R'=sz _p 189)	4.57	4.82	
Mean differences			
$\bar{X}_R - \bar{X}_L$ (p3)		7.89*	
$\bar{X}_R - \bar{X}_E$ (p2)	6.47*		
$\bar{X}_E - \bar{X}_L$ (p2)	.28		

¹ See Table 4, p. 115 for full explanation.

* p < .05

$$s = \sqrt{1.42} = 1.65$$

TABLE 91.--Duncan's New Multiple Range Test¹ applied to amount of contact with mentally retarded persons for four occupational groups in Peru.

Range of Mean (p)	2	3	4	d.f. 109
Studentized ranges for 5% test (Z_p)	2.80	2.95	3.05	
R'_p ($R' = s z_p 109$)	4.12	4.34	4.48	
Mean differences				
$\bar{X}_R - \bar{X}_M$ (p4)			5.33*	
$\bar{X}_R - \bar{X}_L$ (p3)		1.89		
$\bar{X}_E - \bar{X}_M$ (p3)		2.29		
$\bar{X}_R - \bar{X}_E$ (p2)	1.95			
$\bar{X}_E - \bar{X}_L$ (p2)	.38			
$\bar{X}_L - \bar{X}_M$ (p2)	1.41			

¹ See Table 4, p. 115 for full explanation.

* $p < .05$

$$s = \sqrt{1.22} = 1.47$$

TABLE 92.--Duncan's New Multiple Range Test¹ applied to amount of contact with emotionally disturbed persons for occupational groups in Peru.

Range of Mean (p)	2	3	4	d.f. 109
Studentized ranges for 5% test (Zp)	2.80	2.95	3.05	
R'p (R'=szp109)	4.40	4.64	4.79	
Mean differences				
$\bar{X}_R - \bar{X}_M$ (p4)			7.99*	
$\bar{X}_R - \bar{X}_L$ (p3)		3.67		
$\bar{X}_E - \bar{X}_M$ (p3)		3.41		
$\bar{X}_R - \bar{X}_E$ (p2)	4.45*			
$\bar{X}_E - \bar{X}_L$ (p2)	1.34			
$\bar{X}_L - \bar{X}_M$ (p2)	1.21			

$$s = \sqrt{1.31} = 1.57$$

TABLE 96.--Duncan's New Multiple Range Test¹ applied to means of respondents working in SER in Colombia, Peru, and Kansas for Support value scores.

Range of Mean (p)	2	3	d.f. 187
Studentized ranges for 5% test (Zp)	2.77	2.92	
R'p (R'=szp187)	10.625	12.381	
Mean differences			
$\bar{X}_K - \bar{X}_C$ (p3)		77.761*	
$\bar{X}_K - \bar{X}_P$ (p2)	29.189*		
$\bar{X}_P - \bar{X}_C$ (p2)	13.83*		

¹ See Table 4, p. 115 for full explanation.

* $p < .05$

$$s = \sqrt{17.962} = 4.24$$



TABLE 97.--Duncan's New Multiple Range Test¹ applied to means of respondents working in SER in Colombia, Peru, and Kansas for Conformity value scores.

Range of Means	2	3	d.f. 187
Studentized ranges for 5% test (Z_p)	2.77	2.92	
R'_p ($R' = s z_p 187$)	14.606	15.680	
Mean differences			
$\bar{X}_C - \bar{X}_K$ (p3)		65.867*	
$\bar{X}_C - \bar{X}_P$ (p2)	11.526		
$\bar{X}_P - \bar{X}_K$ (p2)	38.717*		

¹ See Table 4, p. 115 for full explanation.

* $p < .05$

$$s = \sqrt{28.647} = 5.37$$

APPENDIX A

A-2 Means, Standard Deviations, and Number of Respondents
for 68 Variables for the Total Sample, Males, and
Females by Occupational Groups and Countries

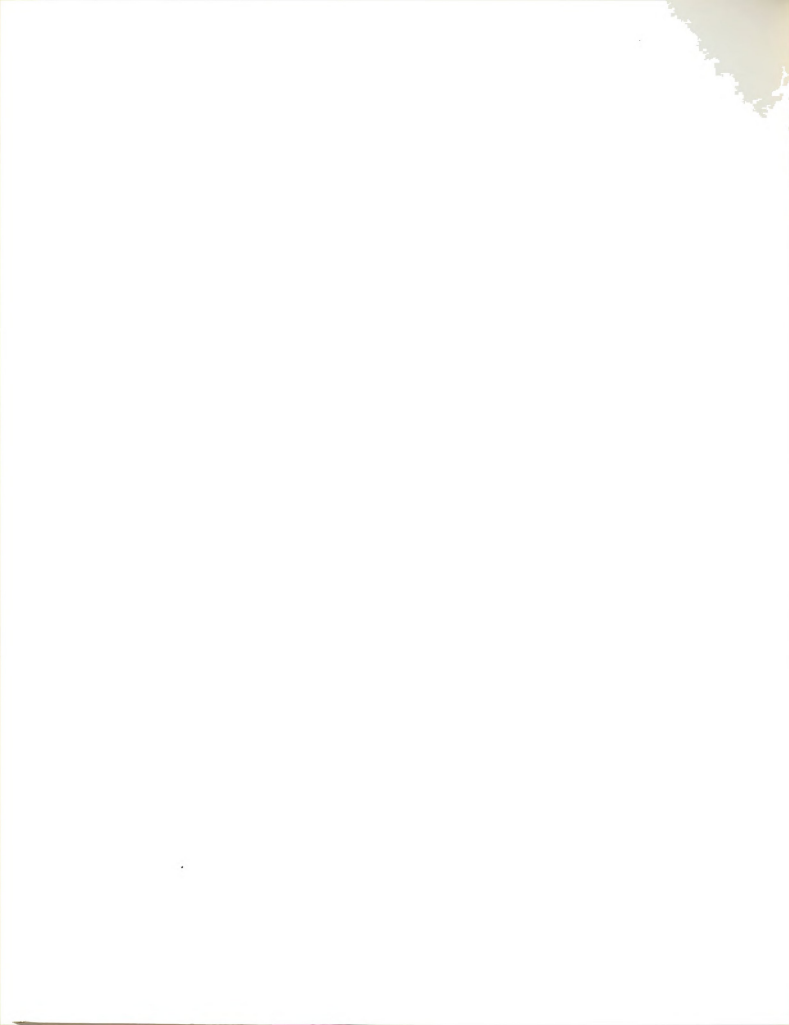


TABLE 103.--Means, standard deviations and number of respondents for 68 variables by total, male, and female respondents for the SER occupational group in Colombia.

Variable	SER - total			SER - male			SER - female		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
1. Sex	1.69	.46	68	1.00	.00	21	2.00	.00	47
2. Support	9.78	4.07	59	8.76	3.42	21	10.34	4.33	38
3. Conformity	22.95	3.80	59	22.52	4.17	21	23.18	3.62	38
4. Recognition	7.14	3.23	59	8.05	3.77	21	6.63	2.82	38
5. Independence	14.36	4.88	59	5.52	5.61	21	13.71	4.37	38
6. Benevolence	21.81	3.90	59	20.57	3.31	21	22.50	4.07	38
7. Leadership	13.46	4.02	59	13.86	3.72	21	13.24	4.21	38
8. Variety of Contact	7.76	3.90	67	8.67	3.45	21	7.35	4.05	46
9. Amount of Contact	4.72	1.75	47	5.00	1.69	20	4.52	1.80	27
10. Gain (Ed)	3.29	1.79	41	2.56	1.69	18	3.87	1.69	23
11. Enjoyment (Ed)	3.60	.62	45	3.68	.48	19	3.54	.71	26
12. Alternative	4.07	1.15	41	3.88	1.11	17	4.21	1.18	24
13. Age	29.17	7.53	65	33.38	7.55	21	27.16	6.71	44
14. Youth Community	2.64	.64	67	2.57	.68	21	2.67	.63	46
15. Residence Community	2.95	.27	67	2.90	.44	21	2.98	.15	46
16. Children	.95	1.41	64	1.95	1.56	21	.46	1.03	43
17. Income	21.72	23.75	60	28.09	29.71	21	18.28	19.42	39
18. Siblings	6.42	4.64	66	6.43	5.98	21	6.43	3.95	45
19. Importance of Religion	3.61	.82	67	3.19	1.08	21	3.80	.58	46
20. Personalism (amount)	5.51	1.75	63	5.33	1.49	21	5.59	1.87	42

TABLE 103.--(cont.)

21.	Pers (Import)	3.43	.77	64	3.43	.81	21	3.44	.76	43
22.	Pers (Diffuse)	3.74	1.77	65	3.09	1.41	21	4.04	1.85	44
23.	Ed Self (amt)	5.58	1.44	67	5.67	1.68	21	5.54	1.33	46
24.	Ed Self (comp)	3.73	.76	68	4.00	.89	21	3.62	.68	47
25.	Ed Father-C	3.43	.85	68	3.29	.78	21	3.49	.88	47
26.	Sat El Ed	2.72	1.23	68	2.52	1.28	21	2.81	1.21	47
27.	Sat Sec Ed	3.08	1.21	65	2.81	1.29	21	3.20	1.17	44
28.	Sat Univer	3.34	1.12	64	3.00	1.38	20	3.50	.98	44
29.	Sat Business	2.64	.97	66	2.81	1.12	21	2.56	.89	45
30.	Sat Labor	2.56	1.24	66	2.90	1.12	20	2.41	1.27	46
31.	Sat Lo govt	2.45	1.07	65	2.05	.94	20	2.33	1.13	45
32.	Sat Nat govt	2.60	1.41	65	2.55	1.39	20	2.62	1.43	45
33.	Sat Health S	2.50	1.15	65	2.45	1.23	20	2.53	1.12	45
34.	Sat Church	3.06	1.37	66	2.71	1.42	21	3.22	1.33	45
35.	Res length	3.42	1.37	66	3.67	1.28	21	3.31	1.41	45
36.	Res change	1.73	.45	63	1.63	.50	19	1.77	.42	44
37.	Job change	1.83	.96	65	2.10	1.16	20	1.71	.84	45
38.	Rel	3.96	.94	68	3.38	1.20	21	4.21	.66	47
39.	Change Health	3.59	.70	66	3.60	.60	20	3.59	.78	46
40.	Ch Child R	3.27	.79	66	3.33	.97	21	3.24	.70	46
41.	Ch Birth C	2.09	.79	67	1.81	.60	21	2.22	.84	46
42.	Ch Automat	3.21	.72	68	3.24	.83	21	3.19	.68	47
43.	Ch Pol Lead	2.44	1.23	68	2.38	1.24	21	2.47	1.23	47
44.	Local Ed	3.46	.76	68	3.47	.75	21	3.45	.77	47
45.	Federal Ed	3.37	.83	67	3.24	.94	21	3.43	.79	46
46.	Ed Planning	2.38	.84	66	2.48	.87	21	2.33	.82	45
47.	Self Change	2.50	.89	68	2.67	.58	21	2.42	.99	47
48.	Change - Rule	2.53	.98	68	2.86	.96	21	2.38	.96	47
49.	Change Rtn Job	2.53	1.01	68	2.57	1.02	21	2.51	1.02	47
50.	Personalism-Fam	2.97	1.10	67	3.05	1.12	21	2.93	1.10	46
51.	Personalism-Oth	3.17	.96	65	3.21	.85	19	3.15	1.01	46
52.	Planning	3.18	.94	66	3.42	.69	19	3.08	1.02	47
53.	HP Primary Cont	5.07	2.11	57	5.50	2.18	18	4.87	2.08	39
54.	HP Variety Cont	6.66	3.26	61	5.62	3.22	21	7.20	3.20	40
55.	HP Amt Contact	3.66	1.50	61	3.40	1.70	20	3.78	1.40	41

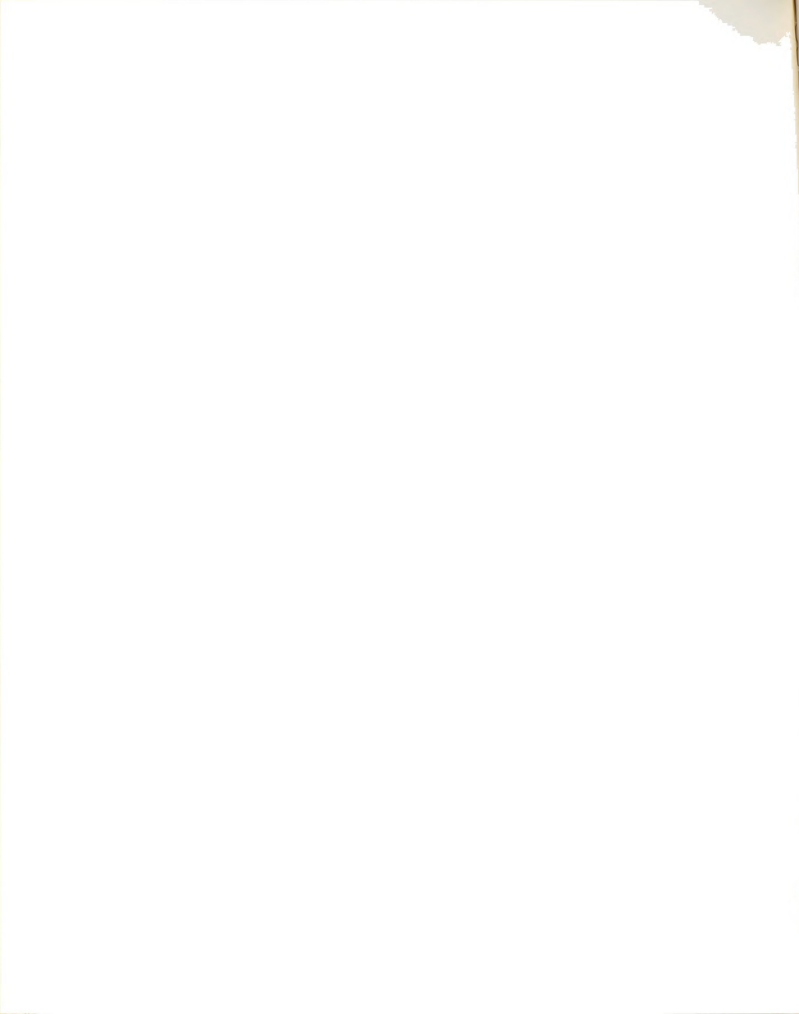


TABLE 103.--(cont.)

Variable	SER - total		SER - male		SER - female	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
		N		N		N
56. HP - ease of avoidance	3.26	1.10	3.60	.82	3.08	1.19
57. HP - gain	2.00	.95	1.89	.94	2.05	.97
58. HP - income	2.97	1.58	2.10	1.45	3.38	1.50
59. HP - enjoyment	3.66	.60	3.42	.77	3.78	.48
60. HP - alternative	4.02	1.45	4.33	1.37	3.91	1.48
61. Amt-Men Retarded	2.72	1.45	3.33	1.49	2.45	1.36
62. Amt-Emot Disturb	2.36	1.52	3.33	1.71	1.93	1.21
63. HP-content total	48.07	7.96	47.65	8.80	48.27	7.63
64. HP-intensity	66.61	7.09	64.95	7.19	67.41	6.99
65. Ed trad Content	28.44	4.86	26.06	4.99	29.54	4.44
66. Ed trad Intens	36.57	2.91	37.44	3.15	36.17	2.75
67. Ed prog-Content	30.02	4.69	30.22	4.36	29.92	4.88
68. Ed prog-Intens	36.74	2.92	36.67	3.31	36.77	2.78

TABLE 104.---Means, standard deviations and number of respondents for 68 variables by total, male, and female respondents for the E occupational group in Colombia.

Variable	SER - total			SER - male			SER - female		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
1. Sex	1.78	.41	125	1.00	.00	27	2.00	.00	98
2. Support	10.22	3.81	117	10.16	3.46	25	10.24	3.93	92
3. Conformity	22.47	4.04	117	23.28	4.28	25	22.25	3.96	92
4. Recognition	7.45	3.24	117	7.52	3.58	25	7.43	3.16	92
5. Independence	14.66	4.62	117	14.56	3.63	25	14.68	4.87	92
6. Benevolence	20.08	4.57	117	19.20	4.07	25	20.31	4.69	92
7. Leadership	14.18	4.12	117	14.82	4.38	25	14.93	4.07	92
8. Variety of Ed ct	8.72	3.25	124	8.15	4.09	27	8.89	2.97	97
9. Amt of Ed cont	5.80	1.78	124	4.93	1.41	27	6.04	1.80	97
10. Gain from Ed	4.54	.94	120	4.56	.97	27	4.53	.94	93
11. Ed enjoyment	3.70	.68	124	3.59	.89	27	3.73	.62	97
12. Ed alternative	3.84	1.11	98	4.04	.93	25	3.78	1.16	73
13. Age	31.32	9.38	120	27.04	6.01	27	32.57	9.83	93
14. Youth Community	2.60	.69	123	2.70	.82	27	2.57	.64	96
15. Residence Comm	2.98	.27	123	2.93	.38	27	2.99	.23	96
16. Children	1.50	2.22	122	.96	1.77	25	1.64	2.31	97
17. Income	17.32	7.72	122	13.23	3.27	26	18.43	8.20	96
18. Siblings	5.66	3.50	122	6.73	4.23	26	5.37	3.24	96
19. Import of Rel	3.69	.62	123	3.33	.83	27	3.79	.50	96
20. Personalism-amt	5.55	1.80	121	5.59	1.62	27	5.54	1.85	94
21. Personalism-imp	3.55	.82	122	3.44	.93	27	3.58	.79	95
22. Personalism-diff	3.87	1.62	120	4.46	1.55	26	3.70	1.61	94
23. Ed Self Amt	4.56	1.14	122	4.41	1.08	27	4.60	1.15	95
24. Ed Self Comp	3.42	.72	121	3.15	.91	27	3.50	.63	94
25. Ed Father Comp	3.49	.87	121	3.11	.93	27	3.60	.82	94



TABLE 104.--(cont.)

26.	Satis Element Ed	3.47	1.20	120	2.92	1.32	26	3.62	1.13	94
27.	Satis Second Ed	3.24	1.15	116	2.63	1.21	27	3.43	1.06	89
28.	Satis University	3.20	1.08	117	2.78	1.28	27	3.32	.98	90
29.	Satis Business	3.08	1.13	118	2.96	1.37	27	3.11	1.04	91
30.	Satis Labor	2.89	1.25	119	2.70	1.35	27	2.95	1.22	92
31.	Satis Local govt	2.58	1.14	119	2.37	1.21	27	2.64	1.11	92
32.	Satis Nat govt	2.48	1.26	119	1.93	1.24	27	2.64	1.23	92
33.	Satis health ser	2.43	1.26	121	2.07	1.17	27	2.53	1.28	94
34.	Satis church	3.38	1.28	122	2.78	1.40	27	3.56	1.19	95
35.	Reside length	3.40	1.35	124	3.04	1.05	27	3.50	1.41	97
36.	Reside-change	1.75	.54	118	1.61	.50	26	1.78	.55	92
37.	Job change	1.54	.92	123	1.96	1.13	27	1.43	.83	96
38.	Relig Conform	4.18	.91	124	3.52	1.22	27	4.36	.71	97
39.	Change-health	3.64	.69	124	3.74	.53	27	3.61	.73	97
40.	Change-child r	3.22	.69	123	3.07	1.03	27	3.26	.93	96
41.	Change-birth c	2.09	.86	124	1.85	.86	27	2.15	.86	97
42.	Change-automat	3.36	.83	120	3.04	1.08	26	3.45	.73	94
43.	Change-pol lead	2.43	1.23	122	2.35	1.38	26	2.45	1.19	96
44.	Local Ed	3.57	.73	122	3.38	.90	26	3.61	.67	96
45.	Federal Ed	3.49	.78	119	3.27	1.04	26	3.55	.68	93
46.	Ed planning	2.78	.50	121	2.81	.49	26	2.78	.51	95
47.	Change-self	2.30	1.06	123	2.27	.87	26	2.31	1.11	97
48.	Change-rule	2.59	1.07	122	2.58	.99	26	2.59	1.09	96
49.	Change-rtn job	2.77	1.01	122	2.65	1.20	26	2.80	.96	96
50.	Personalism-fam	2.73	1.29	123	2.92	1.29	26	2.68	1.29	97
51.	Personalism-oth	3.25	1.00	120	3.19	.89	26	3.27	1.03	94
52.	Planning	3.26	1.02	120	3.31	1.12	26	3.24	1.00	94
53.	HP - prim cont	4.70	2.80	73	4.26	3.14	19	4.85	2.69	54
54.	HP - var of cont	5.19	3.53	73	3.26	2.92	19	5.87	3.50	54
55.	HP - amt of cont	2.21	1.45	72	1.85	1.09	20	2.35	1.56	52
56.	HP - ease of avoidance	3.18	1.20	71	3.24	1.22	21	3.16	1.20	50
57.	HP - gain	1.21	.59	66	1.38	.74	21	1.13	.50	45
58.	HP - income	2.23	1.69	13	3.14	1.86	7	1.17	.41	6



TABLE 104.--(cont.)

Variable	SER - total			SER - male			SER - female		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
59. HP - enjoyment of contact	3.08	.93	72	2.90	1.14	21	3.16	.83	51
60. HP - altern of contact	3.61	1.73	31	3.20	1.82	15	4.00	1.59	16
61. Amt of Ment Retard ctc	1.71	1.14	108	2.17	1.43	23	1.59	1.01	85
62. Amt of Emot Disturb ctc	1.59	1.12	92	2.14	1.39	22	1.41	.97	70
63. HP con raw score	51.94	6.83	110	53.83	7.52	23	51.44	6.58	87
64. HP con intens	69.93	8.14	110	70.09	7.40	23	69.88	8.36	87
65. Ed Trad content score	39.98	3.20	117	28.54	3.13	26	29.08	3.23	91
66. Ed Trad intens	36.71	3.58	116	36.58	3.31	26	36.76	3.67	90
67. Ed prog content score	30.90	4.06	116	30.73	3.18	26	30.96	4.29	90
68. Ed prog intens score	37.47	2.58	115	36.85	2.81	26	37.65	2.49	89



TABLE 105.--Means, standard deviations and number of male respondents for 68 variables for the I occupational group in Colombia.

Variable	SER - male		
	Mean	S.D.	N
1. Sex	1.00	.00	46
2. Support	11.34	3.18	41
3. Conformity	22.17	4.65	41
4. Recognition	9.54	3.29	41
5. Independence	13.83	5.92	41
6. Benevolence	18.80	5.15	41
7. Leadership	14.12	4.27	41
8. Var of Ed cont	6.74	4.44	42
9. Amt of Ed cont	3.52	2.27	21
10. Gain from Ed contact	1.75	1.14	12
11. Ed enjoyment	3.00	.85	12
12. Altern to Ed etc	2.64	1.43	11
13. Age	17.90	1.46	42
14. Youth Community	2.93	.50	44
15. Resident Commun	2.93	.25	44
16. Children	.02	.15	44
17. Income	12.35	17.50	34
18. Siblings	5.86	3.90	44
19. Import of Relig	3.62	.58	42
20. Personalism-amt	4.10	1.81	41
21. Personalism-imp	3.24	.90	42
22. Personalism-dif	3.17	1.50	40
23. Ed Self amount	2.72	.65	46
24. Ed Self comp	3.27	.69	45
25. Ed Father Comp	3.00	.93	45

TABLE 105. (cont.)

26.	Satis Elem Ed	3.41	1.11	46
27.	Satis Sec Ed	3.33	1.13	45
28.	Satis Univer	3.12	.96	43
29.	Satis Business	2.82	.95	44
30.	Satis Labor	2.68	1.01	44
31.	Satis local govt	2.37	1.14	46
32.	Satis nat govt	2.28	1.24	46
33.	Satis health ser	2.54	1.22	46
34.	Satis church	3.65	1.23	46
35.	Length of Resid	3.78	1.38	45
36.	Resid change	1.82	.39	45
37.	Job change	1.82	1.04	44
38.	Relig conform	3.91	1.11	46
39.	Change-health	2.98	.95	46
40.	Change-child r	2.74	.85	46
41.	Change-birth c	2.15	.73	46
42.	Change-autom	2.87	.89	45
43.	Change-pol lead	2.53	1.01	45
44.	Local Ed	3.18	.94	45
45.	Federal Ed	3.12	.96	43
46.	Ed planning	2.44	.81	45
47.	Change-self	2.39	.90	43
48.	Change-rule	2.42	.96	43
49.	Change-rtn job	2.37	.93	43
50.	Personalism-fam	2.21	1.06	43
51.	Personalism-oth	2.49	.91	43
52.	Planning	2.50	.97	42
53.	Prim HP contact	3.87	2.31	24
54.	Var of HP cont	5.07	3.64	27
55.	Amt of HP cont	2.11	1.37	27
56.	HP-ease of avoid	2.64	1.36	22
57.	HP-gain	1.00	.00	19
58.	HP-income	1.33	.58	3
59.	HP-enjoy of cont	2.93	1.08	24



TABLE 105.--(cont.)

Variable		SER - male		
		Mean	S.D.	N
60.	HP-alternatives			
61.	Amt of Ment Retard ctc	2.67	1.86	6
		1.39	.98	43
62.	Amt of Emot Disturb ctc	1.20	.69	39
63.	HP cont score	54.22	6.00	41
64.	HP intens score	64.41	9.44	41
65.	Ed Trad Cont score	30.81	3.54	37
66.	Ed Trad Intens	34.57	4.43	35
67.	Ed Prog Cont score	30.46	4.07	35
68.	Ed Prog Intens	35.41	3.28	34



TABLE 106.---Means, standard deviations and number of respondents for 68 variables by total, male, and female respondents for the SER occupational group in Peru.

Variable	SER - total			SER - male			SER - female		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
1. Sex	1.33	.54	31	1.00	.00	22	2.00	.00	8
2. Support	12.00	3.69	29	12.62	3.48	21	10.00	4.12	7
3. Conformity	21.07	3.38	29	21.29	3.54	21	21.00	2.94	7
4. Recognition	8.45	4.03	29	8.90	4.53	21	7.71	1.70	7
5. Independence	16.28	6.69	29	15.57	6.83	21	16.71	5.34	7
6. Benevolence	19.52	4.47	29	18.76	4.72	21	21.29	3.35	7
7. Leadership	12.72	4.65	29	12.81	4.81	21	13.57	3.60	7
8. Var of Ed ct	11.28	1.92	29	10.95	2.26	20	12.00	.00	8
9. Amt of Ed ct	4.00	1.08	13	4.25	.71	8	4.00	1.41	4
10. Gain from Ed	2.91	1.92	11	2.57	1.99	7	3.67	2.31	3
11. Ed enjoyment	3.50	.67	12	3.29	.76	7	3.75	.50	4
12. Ed alternative	2.75	1.86	12	3.29	1.89	7	2.25	1.89	4
13. Age	26.23	6.98	30	27.00	7.77	22	23.00	2.08	7
14. Youth Community	2.87	.50	31	2.82	.59	22	3.00	.00	8
15. Resid Community	3.03	.18	31	3.04	.21	22	3.00	.00	8
16. Children	.48	1.12	31	.64	1.29	22	.00	.00	8
17. Income	9.97	12.18	31	10.77	14.31	22	8.00	3.82	8
18. Siblings	6.03	3.96	30	6.48	4.07	21	5.62	3.42	8
19. Import of Relig	3.30	.75	30	3.19	.81	21	3.62	.52	8
20. Personalism-amt	3.93	1.77	31	3.54	1.59	22	5.00	2.00	8
21. Personalism-imp	2.45	1.09	31	2.54	.96	22	2.25	1.49	8
22. Personalism-dif	3.45	1.86	31	3.18	1.71	22	4.50	1.93	8
23. Ed-Self amount	5.03	1.87	31	4.68	1.91	22	5.62	1.41	8
24. Ed-Self comp	3.47	1.00	30	3.52	1.08	21	3.25	.89	8
25. Ed-Father comp	3.31	.93	29	3.23	1.04	21	3.57	.53	7



TABLE 106.--(cont.)

26.	Satis-Elem Ed	3.10	.71	30	3.04	.65	22	3.29	.95	7
27.	Satis-Sec Ed	3.41	.87	29	3.33	.79	21	3.71	1.11	7
28.	Satis-Univer	2.90	1.23	29	2.67	1.32	21	3.57	.79	7
29.	Satis-Business	2.66	1.43	29	2.71	1.38	21	3.14	1.68	7
30.	Satis-Labor	3.10	.91	31	3.14	.77	22	3.00	1.31	8
31.	Satis-Local govt	2.93	1.00	31	3.04	1.05	22	2.62	.92	8
32.	Satis-Nat govt	3.10	1.08	31	3.23	1.15	22	2.75	.89	8
33.	Satis-health ser	2.87	.85	31	2.77	.81	22	3.12	.99	8
34.	Satis-Church	3.16	1.00	31	2.91	1.02	22	3.75	.71	8
35.	Resident-length	3.90	1.14	31	4.00	1.06	22	3.75	1.39	8
36.	Resident-change	1.83	.38	30	1.81	.40	21	1.87	.35	8
37.	Job change	1.87	1.09	31	1.95	.95	22	1.62	1.51	8
38.	Religious Conf	3.33	1.03	30	3.27	1.03	22	3.43	1.13	7
39.	Change-health	3.07	1.12	28	2.86	1.06	21	3.67	1.21	6
40.	Change-child r	3.00	1.02	28	2.95	1.02	21	3.00	1.09	6
41.	Change-birth c	2.07	.72	28	2.00	.71	21	2.33	.82	6
42.	Change-autom	3.18	.90	28	3.33	.91	21	2.67	.82	6
43.	Change-pol lead									
44.	Local Ed plann									
45.	Federal Ed plann									
46.	Ed planning									
47.	Change-Self	2.53	.94	30	2.54	1.01	22	2.43	.79	7
48.	Change-rule adh	2.30	1.05	30	2.18	1.05	22	2.43	.98	7
49.	Change-self rtn job	2.81	1.18	27	2.85	1.23	20	2.67	1.21	6
50.	Personalism-fam									
51.	Personalism-oth	2.65	1.11	29	2.70	1.03	20	2.62	1.41	8
52.	Planning-Fut Orie	2.33	1.21	30	2.33	1.27	21	2.37	1.19	8
53.	Primary HP Cont									
54.	Var of HP Cont	12.83	13.97	30	9.91	7.87	22	22.43	24.22	7
55.	Amt of Hp Cont	3.50	1.66	30	3.42	1.63	21	3.62	1.92	8
56.	HP ease of avoidance	3.31	1.00	29	3.14	1.11	21	3.71	.49	7
57.	HP-gain	2.53	1.43	28	2.45	1.05	20	2.96	2.34	7
58.	HP-income	4.00	1.64	24	3.88	1.73	17	4.29	1.50	7

Variables 43-46 omitted for Peru

TABLE 106.-- (cont.)

Variable	SER - total			SER - male			SER - female		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
59. HP-enjoy of etc	3.40	1.04	30	3.32	.99	22	3.57	1.27	7
60. HP-alternatives	4.28	.96	29	4.29	1.01	21	4.14	.90	7
61. Amt of Ment Retard etc	2.54	1.40	28	2.50	1.47	20	2.57	1.39	7
62. Amt of Emot Disturb etc	3.17	1.81	29	2.60	1.50	20	4.50	2.00	8
63. HP Cont score	49.43	8.19	30	48.68	7.82	22	51.71	10.11	7
64. HP Intens score	61.40	13.15	31	60.54	14.41	22	62.43	9.07	7
65. Ed Trad Cont score	31.77	5.51	31	31.50	2.82	22	32.25	10.25	8
66. Ed Trad Intens	33.87	5.12	31	33.45	4.83	22	35.00	6.37	8
67. Ed Prog Cont score	30.64	4.32	31	30.19	3.54	22	30.75	5.42	8
68. Ed Prog Intens	31.58	5.15	31	32.14	4.28	22	29.12	6.56	8

TABLE 107.---Means, standard deviations and number of respondents for 68 variables by total, male, and female respondents for the M occupational group in Peru.

Variable	SER - total			SER - male			SER - female		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
1. Sex	1.14	.35	63	1.00	.00	54	2.00	.00	9
2. Support	12.05	3.88	62	11.92	4.07	53	12.78	2.54	9
3. Conformity	18.48	5.06	62	14.29	4.76	53	18.44	6.91	9
4. Recognition	8.48	3.25	62	8.32	3.17	53	9.44	3.74	9
5. Independence	16.05	6.27	62	15.72	6.34	53	18.00	5.81	9
6. Benevolence	17.18	4.83	62	16.85	4.80	53	19.11	4.81	9
7. Leadership	17.52	6.89	62	18.41	6.36	53	12.22	7.90	9
8. Var of Ed Con	8.24	3.51	62	8.23	3.51	53	8.33	3.71	9
9. Amt of Ed Con	3.37	1.56	40	3.40	1.48	35	3.20	2.28	5
10. Gain from Ed	2.77	1.66	39	3.73	1.64	34	3.00	2.00	5
11. Educa enjoy	3.26	.88	29	3.31	.83	35	2.75	1.26	4
12. Educa altern	4.23	1.23	34	4.27	1.23	30	4.00	1.41	4
13. Age	31.08	7.20	59	31.10	7.32	51	31.00	6.84	8
14. Youth Commun	2.94	.40	63	2.93	.43	54	3.00	.00	9
15. Resid Commun	3.00	.44	63	3.04	.39	54	2.78	.67	9
16. Children	1.13	1.78	62	1.32	1.86	53	.00	.00	9
17. Income	18.14	21.19	57	16.90	20.26	50	27.00	27.08	7
18. Siblings	4.05	2.66	62	3.94	2.68	53	4.67	2.55	9
19. Import of Relig	3.08	.87	63	3.04	.82	54	3.33	1.12	9
20. Personalism-amt	4.08	1.70	62	4.19	1.75	53	3.44	1.24	9
21. Personalism-imp	2.36	1.04	63	2.50	1.02	54	1.56	.73	9
22. Personalism-dif	2.70	1.09	63	2.67	1.05	54	2.89	1.36	9
23. Ed-Self Amt	6.08	1.17	63	6.09	1.19	54	6.00	1.12	9
24. Ed-Self Comp	3.92	.65	63	3.96	.61	54	3.67	.87	9
25. Ed-Father's Comp	3.42	.78	62	3.38	.76	53	3.67	.87	9

TABLE 107.--(cont.)

26.	Satis-Elem Ed	3.22	1.12	62	3.11	1.10	53	3.89	1.05	9
27.	Satis-Sec Ed	3.26	.85	62	3.19	.83	53	3.67	.87	9
28.	Satis-Univer	3.18	.97	61	3.17	.94	52	3.22	1.20	9
29.	Satis-Business	2.76	1.08	62	2.74	1.09	53	2.89	1.05	9
30.	Satis-Labor	3.10	.90	62	3.00	.88	53	3.67	.87	9
31.	Satis-Local govt	2.94	.84	63	2.96	.80	54	2.78	1.09	9
32.	Satis-Nat govt	3.33	.86	63	3.33	.87	54	3.33	.87	9
33.	Satis-Health ser	3.09	.86	63	3.04	.85	54	3.44	.88	9
34.	Satis-Church	3.51	1.03	63	3.35	.99	54	4.44	.73	9
35.	Resident-length	4.13	1.34	63	4.11	1.37	54	4.22	1.20	9
36.	Resident-change	1.75	.43	61	1.73	.45	52	1.89	.33	9
37.	Job Change	1.73	1.07	62	1.72	1.08	53	1.78	1.09	9
38.	Relig Conform	3.53	1.20	62	3.38	.98	53	4.44	1.88	9
39.	Change-Health	3.39	.90	61	3.46	.83	52	3.00	1.22	9
40.	Change-Child r	3.42	.86	62	3.43	.82	53	3.33	1.12	9
41.	Change-Birth c	2.08	.82	62	2.00	.81	53	2.55	.73	9
42.	Change-Autom	3.33	.93	61	3.41	.93	53	2.75	.71	8
43.	Change-Pol lead									
44.	Local Ed Plann									
45.	Federal Ed Plann									
46.	Ed Planning									
47.	Change-Self	2.87	.85	63	2.85	.86	54	3.00	.87	9
48.	Change-rule adh	2.82	1.05	63	2.80	1.09	54	3.00	.87	9
49.	Change-self rtn job	3.12	.98	57	3.08	1.02	49	3.37	.74	8
50.	Personalism-fam									
51.	Personalism-oth	3.08	.92	61	2.94	.85	52	3.89	.93	9
52.	Planning-Fut Ori	3.24	1.32	63	3.24	1.30	53	3.22	1.48	9
53.	Primary HP Cont									
54.	Var of HP Cont	9.98	13.45	41	10.23	14.48	34	8.71	7.13	7
55.	Amt of HP Cont	2.80	1.56	40	2.65	1.53	34	3.56	1.50	6
56.	HP-ease of avoidance	3.51	.90	41	3.59	.82	34	3.14	1.21	7
57.	HP-gain	1.51	1.35	39	1.62	1.48	32	1.00	.00	7
58.	HP-income	1.87	1.46	8	2.00	1.53	7	1.00	.00	1

Variables 43-46 omitted for Peru

TABLE 107.--(cont.)

59.	HP-enjoy of ctc	3.10	.98	40	3.06	.90	33	3.29	1.38	7
60.	HP-alternatives	3.50	1.56	14	3.67	1.50	12	2.50	2.12	2
61.	Amt of Ment Retard ctc	1.60	1.00	57	1.46	.85	48	2.33	1.41	9
62.	Amt of Emot Disturb ctc	1.74	1.52	57	1.62	1.35	48	2.33	2.24	9
63.	HP Cont score	47.49	6.34	63	47.72	6.30	54	46.11	6.84	9
64.	HP Intens score	57.89	11.38	63	57.20	11.92	54	62.00	6.28	9
65.	Ed Trad Cont score	29.79	3.81	63	29.63	3.69	54	30.78	4.63	9
66.	Ed Trad Intens	31.35	5.41	63	31.31	5.67	54	31.56	3.81	9
67.	Ed Prog Cont score	29.92	4.27	63	29.67	4.14	54	31.44	4.98	9
68.	Ed Prog Intens	31.48	4.56	63	31.68	4.62	54	30.22	4.18	9



TABLE 108.--Means, standard deviations and number of respondents for 68 variables by total, male, and female respondents for the SER occupational group in Kansas.

Variable	SER - total			SER - male			SER - female		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
1. Sex	1.79	.41	103	1.00	.00	22	2.00	.00	81
2. Support	17.65	4.47	100	16.50	4.92	22	17.97	4.31	78
3. Conformity	15.30	6.47	100	11.68	7.23	22	16.32	5.89	78
4. Recognition	10.29	3.91	100	10.91	4.57	22	10.11	3.72	78
5. Independence	15.82	6.10	100	17.14	5.44	22	15.45	6.26	78
6. Benevolence	20.22	5.22	100	18.18	6.53	22	20.79	4.68	78
7. Leadership	9.89	6.20	100	14.27	6.42	22	8.65	5.58	78
8. Var of Ed Cont	10.87	1.77	103	10.82	1.89	22	10.89	1.75	81
9. Amt of Ed Cont	5.48	1.82	101	4.59	1.46	22	5.73	1.84	79
10. Gain from Ed	4.43	1.16	101	4.32	1.32	22	4.46	1.12	79
11. Educa Enjoy	3.87	.36	101	4.77	.43	22	3.90	.34	79
12. Educa Altern	3.73	1.41	100	3.54	1.47	22	3.78	1.39	78
13. Age	36.71	12.02	103	30.28	5.90	22	38.47	12.66	81
14. Youth Commun	2.25	.89	103	3.64	.85	22	2.15	.88	81
15. Residence Commun	2.86	.50	103	2.95	.37	22	2.84	.64	81
16. Children-Number	1.76	1.71	103	1.73	1.42	22	1.76	1.79	81
17. Income	9.25	3.98	101	9.19	3.14	21	9.26	4.19	80
18. Siblings	2.56	2.37	103	2.94	1.89	22	2.70	2.48	81
19. Import of Relig	3.45	.71	103	3.00	.93	22	3.57	.59	81
20. Personalism-amt	4.49	1.65	101	4.81	1.63	21	4.41	1.66	80
21. Personalism-imp	2.70	.76	101	3.00	.71	21	2.62	.75	80
22. Personalism-dif	3.00	1.48	101	2.86	1.31	21	3.04	1.52	80
23. Ed-Self Amt	6.83	.92	103	7.36	.66	22	6.69	.93	81
24. Ed-Self Comp	3.91	.63	103	4.27	.63	22	3.81	.59	81
25. Ed-Father's Comp	3.03	1.00	103	2.82	.96	22	3.09	1.01	81

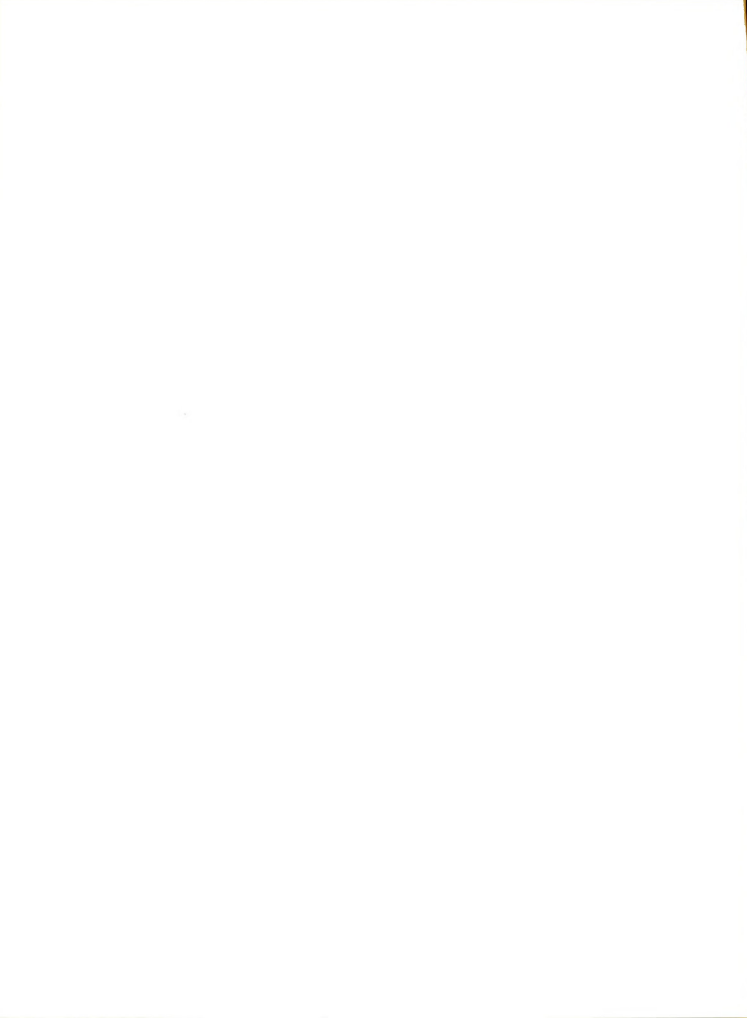


TABLE 108.--(cont.)

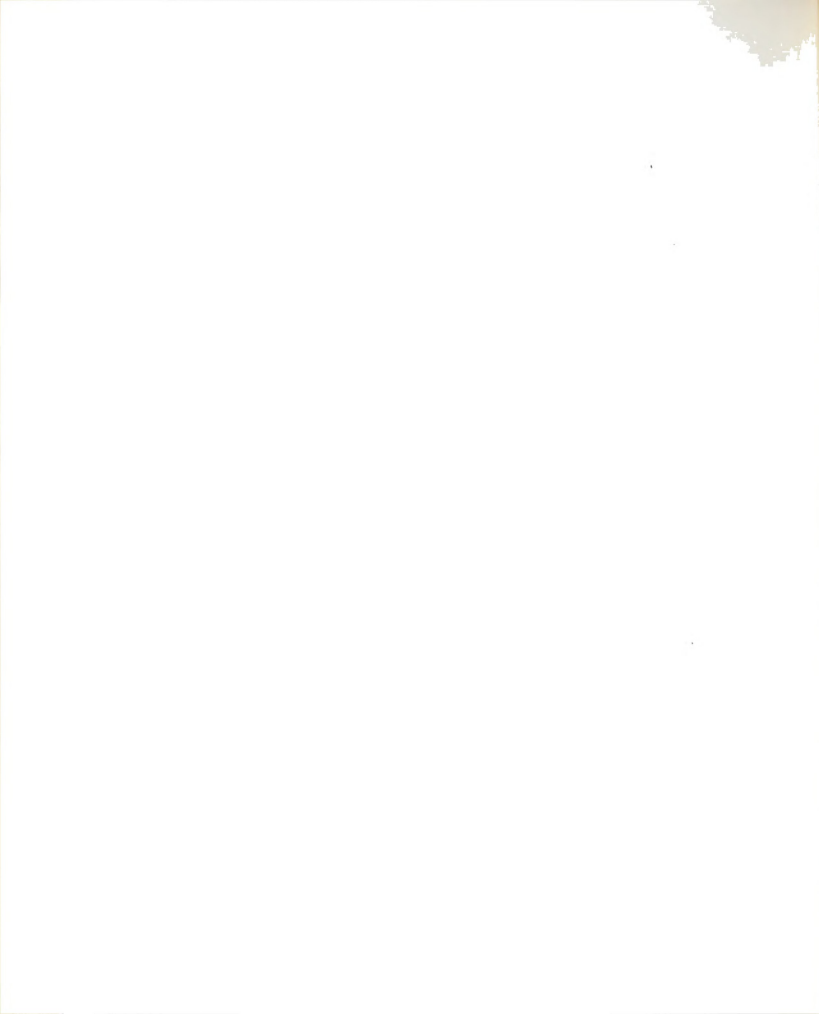
26.	Satis-Elem Ed	3.81	.93	103	3.32	1.13	22	3.94	.83	81
27.	Satis-Sec Ed	3.66	.97	102	3.32	1.13	22	3.75	.91	80
28.	Satis-Univer	3.57	.98	101	3.14	1.94	22	3.70	.94	79
29.	Satis-Business	3.42	.91	102	3.41	.85	22	3.42	.92	80
30.	Satis-Labor	2.98	.86	102	2.82	.96	22	3.02	.83	80
31.	Satis-Local Govt	2.59	1.07	102	2.36	1.29	22	2.65	1.01	80
32.	Satis-Nat Govt	2.90	1.08	102	3.04	1.13	22	2.87	1.08	80
33.	Satis-Health ser	3.51	.98	102	3.41	1.99	22	3.54	.98	80
34.	Satis-Church	3.15	1.25	103	2.82	1.30	22	3.25	1.23	81
35.	Resid-Length	3.41	1.50	103	3.00	1.45	22	3.52	1.51	81
36.	Resid-Change	1.73	.44	102	1.76	.44	21	1.73	.45	81
37.	Job Change	2.11	.97	103	2.36	1.05	22	2.94	.94	81
38.	Relig Conform	4.21	.84	102	3.54	1.01	22	4.39	.68	80
39.	Change-Health	3.62	.74	103	3.68	.78	22	3.60	.74	81
40.	Change-Child r	2.98	.78	103	3.94	.84	22	2.96	.77	81
41.	Change-Birth c	1.62	.67	103	1.32	.64	22	1.70	.66	81
42.	Change-Autom	3.22	.73	103	3.36	.79	22	3.18	.71	81
43.	Change-Pol Lead	2.61	1.91	103	2.73	1.98	22	2.58	1.00	81
44.	Local Ed-Finance	3.12	.81	103	3.18	.79	22	3.10	.81	81
45.	Fed Ed-Finance	2.79	.92	103	3.18	.85	22	2.69	.92	81
46.	Ed planning	1.97	.55	103	2.04	.57	22	1.95	.54	81
47.	Change-Self	2.78	.61	103	2.73	.46	22	2.79	.65	81
48.	Change-Rule Adh	2.85	.68	103	2.91	.61	22	2.83	.70	81
49.	Change-Self rtn job	2.88	.85	103	3.23	.75	22	2.70	.86	81
50.	Personalism-fam	3.74	.48	103	3.59	.59	22	3.78	.45	81
51.	Personalism-oth	3.03	.76	102	3.04	.65	22	3.02	.79	80
52.	Planning-Fut Ori	3.60	.63	102	3.54	.74	22	3.61	.61	80
53.	HP-Cont-Primary	6.70	1.94	100	6.57	2.13	21	6.73	1.90	79
54.	HP-Cont-Variet	8.85	2.35	101	8.33	2.78	21	8.99	2.23	80
55.	HP-Cont-Amt	4.40	1.03	101	4.52	.81	21	4.36	1.08	80
56.	HP-ease of avoidance	2.47	1.35	100	2.24	1.34	21	2.53	1.36	79
57.	HP-gain	2.75	1.13	100	3.19	1.08	21	2.60	1.13	79
58.	HP-income	3.87	1.42	87	4.15	1.35	20	3.79	1.44	67

TABLE 108.--(cont.)

Variable	SER - total			SER - male			SER - female		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
59. HP-enjoyment	3.83	.43	99	3.71	.46	21	3.86	.42	78
60. HP-alternatives	3.88	1.39	93	3.90	1.94	21	3.87	1.48	72
61. Ment Retard ctc amount	4.29	.96	99	4.59	.80	22	4.34	.99	77
62. Emot Disturb ctc amount	2.95	1.44	99	3.14	1.49	22	2.90	1.43	77
63. HP-Cont score	44.58	4.59	102	43.18	5.28	22	44.96	4.33	80
64. HP-Intens score	60.16	7.71	102	61.36	7.88	22	59.82	7.68	80
65. Ed Trad-Cont score	26.47	2.68	103	25.86	2.14	22	26.63	2.79	81
66. Ed Trad-Intens	30.51	3.77	103	29.77	4.43	22	30.72	3.58	81
67. Ed Prog-Cont score	31.16	3.14	102	32.27	3.18	22	30.85	3.97	80
68. Ed Prog-Intens	32.83	3.14	102	32.64	4.04	22	32.89	2.87	80

APPENDIX B

1. Attitudes Toward Education
2. Survey of Interpersonal Values
3. Personal Questionnaire
4. Attitudes Toward Handicapped Persons
5. Personal Questionnaire:
HP



APPENDIX B

Instrumentation

B-1 Attitudes Toward Education



NO. _____

Location _____

Male _____

Group _____

Female _____

Date _____

EDUCATION SCALE

Instructions: Given below are 20 statements of opinion about education. We all think differently about schools and education. Here you may express how you think by choosing one of the four possible answers following each statement. These answers indicate how much you agree or disagree with the statement. Please mark your answer by placing a circle around the number in front of the answer you select.

You are also asked to indicate for each statement how strongly you feel about your marking of the statement. Please mark this part of your answer in the same way as before, by placing a circle around the number in front of the answer you select.

1. The goals of education should be dictated by children's interests and needs as well as by the larger demands of society.

1. Strongly disagree

3. Agree

2. Disagree

4. Strongly agree

About how strongly do you feel about your answer?

1. Not strongly at all

3. Fairly strongly

2. Not very strongly

4. Very strongly

2. No subject is more important than the personalities of the pupils.

1. Strongly disagree

3. Agree

2. Disagree

4. Strongly agree

About how strongly do you feel about your answer?

1. Not strongly at all

3. Fairly strongly

2. Not very strongly

4. Very strongly



No. _____

2

E.D.

3. Schools of today are neglecting reading, writing, and arithmetic; the three R's.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

4. The pupil-teacher relationship is the relationship between a child who needs direction, guidance, and control and a teacher who is an expert supplying direction, guidance, and control.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

5. Teachers, like university professors, should have academic freedom--freedom to teach what they think is right and best.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

No. _____

3

E.D.

6. The backbone of the school curriculum is subject matter; activities are useful mainly to facilitate the learning of subject matter.

- | | |
|----------------------|----------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly disagree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

7. Teachers should encourage pupils to study and criticize our own and other economic systems and practices.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

8. The traditional moral standards of our culture should not just be accepted; they should be examined and tested in solving the present problems of students.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

No. _____

4

E.D.

9. Learning is experimental; the child should be taught to test alternatives before accepting any of them.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

10. The curriculum consists of subject matter to be learned and skills to be acquired.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

11. The true view of education is so arranging learning that the child gradually builds up a storehouse of knowledge that he can use in the future.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

No. _____

5

E.D.

12. One of the big difficulties with modern schools is that discipline is often sacrificed to the interests of children.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

13. The curriculum should be made up of an orderly sequence of subjects that teach to all students the best of our cultural heritage.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

14. Discipline should be governed by long-range interests and well-established standards.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

No. _____

6

E.D.

15. Education and educational institutions must be sources of social ideas; education must be a social program undergoing continual reconstruction.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

16. Right from the very first grade, teachers must teach the child at his own level and not at the level of the grade he is in.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About now strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

17. Children should be allowed more freedom than they usually get in the execution of learning activities.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

No. _____

7

E.D.

18. Children need and should have more supervision and discipline than they usually get.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

19. Learning is essentially a process of increasing one's store of information about the various fields of knowledge.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

20. In a democracy, teachers should help students understand not only the meaning of democracy but also the meaning of the ideologies of other political systems.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

APPENDIX B

Instrumentation

B-2 Survey of Interpersonal Values



S R A SURVEY OF INTERPERSONAL VALUES

By LEONARD V. GORDON

DIRECTIONS



In this booklet are statements representing things that people consider to be important to their way of life. These statements are grouped into sets of three. This is what you are asked to do:

Examine each set. Within each set, find the **one statement** of the three which represents what you consider to be **most important** to you. Blacken the space beside that statement in the column headed M (for **most**).

Next, examine the remaining two statements in the set. Decide which **one** of these statements represents what you consider to be **least important** to you. Blacken the space beside that statement in the column headed L (for **least**).

For every set you will mark **one statement** as representing what is **most important** to you, **one statement** as representing what is **least important** to you, and you will leave **one statement** unmarked.

Example

	M	L
To have a hot meal at noon	
To get a good night's sleep
To get plenty of fresh air	

Suppose that you have examined the three statements in the example, and although all three of the statements may represent things that are important to you, you feel that "To get plenty of fresh air" is the **most important** to you. You would blacken the space in the column headed M (for **most**) beside the statement. Notice that this has been done in the example.

You would then examine the remaining two statements to decide which of these represents something that is **least important** to you. Suppose that "To have a hot meal at noon" is the **least important** to you. You would blacken the space in the column headed L (for **least**) next to this statement. Notice that this has been done in the example.

You would leave the remaining statement unmarked.

In some cases it may be difficult to decide which statement to mark. Make the best decision that you can. This is not a test; there are no right or wrong answers. Be sure to mark **only one M (most)** choice and **only one L (least)** choice in a set. Do not skip any sets. Answer every set. Turn this booklet over and begin.



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Grade or Occupation _____ Date _____ Marital Status _____
School or Firm _____

No. _____

Location _____

Male _____

Group _____

Female _____

Date _____

PERSONAL QUESTIONNAIRE

This questionnaire has two parts to it. The first part has to do with your contacts with schools and education, and what you know about education. You may have had considerable contact with schools and education, or you may know a great deal about education. On the other hand, you may have had little or no contact with schools or education and may have never thought much about it at all.

For the purposes of this investigation, the answers of all persons are important. If you know very little or nothing about schools or education, your answers are important. If you know a great deal about them, your answers are important.

The second part of the questionnaire has to do with personal information about you. Since the questionnaire is completely anonymous, you may answer all of the questions freely without any concern about being identified. It is important to the study to obtain your answer to every question.

	M	L	M	L
To be a person of influence.....	.....	.....	.....	.....
To be treated with kindness.....	.....	.....	.....	.....
To always maintain the highest moral standards.....	.....	.....	.....	.....
	M	L	M	L
To be praised by other people .....	.....	.....	.....	.....
To be relatively unbound by social conventions.....	.....	.....	.....	.....
To work for the good of society .....	.....	.....	.....	.....
	M	L	M	L
To have the affection of other people.....	.....	.....	.....	.....
To do things in the approved manner.....	.....	.....	.....	.....
To go around doing favors for other people .....	.....	.....	.....	.....
	M	L	M	L
To be allowed to do whatever I want to do.....	.....	.....	.....	.....
To be regarded as the leader .....	.....	.....	.....	.....
To do what is socially correct .....	.....	.....	.....	.....
	M	L	M	L
To have others approve of what I do.....	.....	.....	.....	.....
To make decisions for the group .....	.....	.....	.....	.....
To share my belongings with other people .....	.....	.....	.....	.....
	M	L	M	L
To be free to come and go as I want to .....	.....	.....	.....	.....
To help the poor and needy .....	.....	.....	.....	.....
To show respect to my superiors .....	.....	.....	.....	.....
	M	L	M	L
To be given compliments by other people .....	.....	.....	.....	.....
To be in a very responsible position .....	.....	.....	.....	.....
To do what is considered conventional .....	.....	.....	.....	.....
	M	L	M	L
To be in charge of a group of people .....	.....	.....	.....	.....
To make all of my own decisions .....	.....	.....	.....	.....
To receive encouragement from others .....	.....	.....	.....	.....
	M	L	M	L
To be looked up to by other people .....	.....	.....	.....	.....
To be quick in accepting others as friends .....	.....	.....	.....	.....
To direct others in their work .....	.....	.....	.....	.....
	M	L	M	L
To be generous toward other people .....	.....	.....	.....	.....
To be my own boss .....	.....	.....	.....	.....
To have understanding friends .....	.....	.....	.....	.....
	M	L	M	L
To be selected for a leadership position .....	.....	.....	.....	.....
To be treated as a person of some importance .....	.....	.....	.....	.....
To have things pretty much my own way .....	.....	.....	.....	.....
	M	L	M	L
To have other people interested in me .....	.....	.....	.....	.....
To have proper and correct social manners .....	.....	.....	.....	.....
To be sympathetic with those who are in trouble .....	.....	.....	.....	.....
	M	L	M	L
To be very popular with other people .....	.....	.....	.....	.....
To be free from having to obey rules .....	.....	.....	.....	.....
To be in a position to tell others what to do.....	.....	.....	.....	.....
	M	L	M	L
To always do what is morally right .....	.....	.....	.....	.....
To go out of my way to help others .....	.....	.....	.....	.....
To have people willing to offer me a helping hand .....	.....	.....	.....	.....
	M	L	M	L
To have people admire me .....	.....	.....	.....	.....
To always do the approved thing .....	.....	.....	.....	.....
To be able to leave things lying around if I wish .....	.....	.....	.....	.....

S	C	R	I	B	L	V

APPENDIX B

Instrumentation

B-3 Personal Questionnaire

No. _____

Location _____

Male _____

Group _____

Female _____

Date _____

PERSONAL QUESTIONNAIRE

This questionnaire has two parts to it. The first part has to do with your contacts with schools and education, and what you know about education. You may have had considerable contact with schools and education, or you may know a great deal about education. On the other hand, you may have had little or no contact with schools or education and may have never thought much about it at all.

For the purposes of this investigation, the answers of all persons are important. If you know very little or nothing about schools or education, your answers are important. If you know a great deal about them, your answers are important.

The second part of the questionnaire has to do with personal information about you. Since the questionnaire is completely anonymous, you may answer all of the questions freely without any concern about being identified. It is important to the study to obtain your answer to every question.

Please read each question carefully and do not omit any questions. Please answer by circling the correct answer (or answers) or fill in the answer as requested.

SECTION 1: Experiences with Schools and Education

1. Below are listed several different kinds of schools or educational divisions. In respect to these various kinds or levels of education, which one have you had the most professional or work experience with, or do you have the most knowledge about? This does not refer to your own education. Please answer by circling the number of the group you select. Circle only one.

Elementary School (Grade School) 1
Secondary School (High School) 2
College or University 3
Other Types (Please Specify) 4
I have had no such experience 5

2. Which other groups, in addition to the one indicated above, have you also had some professional or work experience with? Please circle the number of each additional group with which you have had some experience.

Elementary School (Grade School) 1
Secondary School (High School) 2
College or University 3
Other Types (Please Specify) 4
I have had no such experience 5



3. The following questions have to do with additional kinds of contracts you have had with schools or education. Please circle the number of each experience that applies to you. Be sure and circle the number of every experience that applies to you.

I know little or nothing about education 1

I have read or heard a little about schools and education 2

I have studied about schools and education through reading, movies, lectures, or observations 3

A neighbor of mine works in education 4

A friend of mine works in education 5

Some relative works in education 6

My father, mother, brother, sister, wife (husband), or child works in education (in any position, professional or non-professional) 7

I have worked in education, as a teacher, administrator, counselor, volunteer, etc. 8

Other (Please Specify) _____ 9

If on the preceding three questions you indicated that you have had no personal experience with any kind of education, please skip Questions #4 through #7. If you indicated that you have had experience with one or more of the levels of education listed, please answer Questions #4 through #7.

4. About how much have you worked in schools or educational settings? Please circle the number of the one best answer.

Less than three months 1
Between three and six months 2
Between six months and one year 3
Between one and three years 4
Between three and five years 5
Between five and ten years 6
Over ten years 7
Over fifteen years 8

5. If you have ever worked in education, about what per cent of your income was derived from such work?

Less than 10% 1
Between 10 and 25% 2
Between 25 and 50% 3
Between 50 and 75% 4
Between 75 and 100% 5

6. If you have ever worked in education, how have you generally felt about it?

I definitely have disliked it 1
I have not liked it very much 2
I have liked it somewhat 3
I have definitely enjoyed it 4

7. If you have ever worked in education for personal gain, (for example, for money or some other gain), what opportunities did you have (or do you have) to work at something else instead, that is, something else that was (or is) acceptable to you as a job?

I do not know what other jobs were available or acceptable 1

No other job was available 2

Other jobs available were not at all acceptable to me . 3

Other jobs available were not quite acceptable to me .. 4

Other jobs available were fully acceptable to me 5

8. How old are you? (Write age in box)

9. Where were you mainly reared or "brought up" in your youth (that is, up to the age of 15 or 16)?

Country 1

Country Town 2

City 3

City Suburb 4

10. Where have you (or the main bread winner in your family) been employed during the past three years?

Country 1

Country Town 2

City 3

City Suburb 4

11. Where you have mainly lived during the past three years?

Country 1
Country Town 2
City 3
City Suburb 4

12. What is your marital status?

Married 1
Single 2
Divorced 3
Widowed 4
Separated 5

13. How many children do you have? (Please write number in box).

14. Please answer either A or B, which applies best to your present situation. Please read both choices, than answer only one.

A. If you are self-supporting, about what is your total yearly income before taxes (or, if you are married, the total yearly income in the family). Include extra income from any regular sources such as dividends, insurance, etc. Please write the total in the box .

B. If you are not self-supporting (or, if you are married, if your family is not self-supporting), what is the approximate total yearly income before taxes of the persons who mainly provide your support (that is, parents, relatives or others). Make the best estimate you can.

15. According to your answer to Question 14, about how does your income compare with that of most people in the total community where you live?

Much lower 1
Lower 2
About the same 3
Higher 4
Much higher 5

16. How many brothers have you? (Please write number in box).

17. How many sisters have you? (Please write number in box).

18. About how does (or did) your father's income compare with that of most people in the community in which he lives (or lived)?

Much lower 1
Lower 2
About the same 3
Higher 4
Much higher 5

19. What is your religion?

Catholic 1
Protestant 2
Jewish 3
None 4
Other (Please Specify) 5

20. About how important is your religion to you in your daily life?

I have no religion 1
Not very important 2
Fairly important 3
Very important 4

21. During an "average" work day, you probably have occasion to talk and make contact with other adult persons where you are employed. Estimate about what per cent of these contacts and conversations are with people you feel personally close to, whom you consider to be close friends, or that are relatives of yours.

None 1
I do not usually talk or make contact with other adult persons where I am employed 2
Less than 10% 3
Between 10 and 30% 4
Between 30 and 50% 5
Between 50 and 70% 6
Between 70 and 90% 7
More than 90% 8



22. How important is it to you to work with people you feel personally close to?

- Not at all important 1
- Not very important 2
- Fairly important 3
- Very important 4

23. Now please consider all of the personal contacts you have with people when you are not at work. Would you estimate about what per cent of your contacts apart from working hours are spent with people whom you know because of your job; that is, those who work at the same job, trade, or profession, or in the same place that you do, or that you otherwise contact in the pursuit of your job.

- None 1
- Less than 10% 2
- Between 10 and 30% 3
- Between 30 and 50% 4
- Between 50 and 70% 5
- Between 70 and 90% 6
- More than 90% 7

24. What social class do you believe you are in?

- Lower 1
- Lower Middle 2
- Middle 3
- Upper Middle 4
- Upper 5
- Upper Upper 6



25. Which social class do you believe your father is (or was) in?

- Lower 1
- Lower Middle 2
- Middle 3
- Upper Middle 4
- Upper 5
- Upper Upper 6

26. About how much education do you have (Circle only one).

- 3 years of school or less 1
- 6 years of school or less 2
- 9 years of school or less 3
- 12 years of school or less 4
- Some college or university 5
- A college or university degree 6
- Some graduate work beyond the first degree 7
- One or more advanced degrees 8
- Other (Please note number of years of study or diploma
obtained) 9



27. About how does your education compare with that of most people?

Much less than most	1
Less than most	2
About average	3
More than most	4
Much more than most	5

28. About how does (or did) your father's education compare with that of most people in his time?

Much less than most	1
Less than most	2
About average	3
More than most	4
Much more than most	5

29. What type of living arrangement do you have?

Rent a house	1
Rent an apartment	2
Rent a room (meals in a restaurant, etc.)	3
Purchase a room and board (rooming house, etc.)	4
Own an apartment	5
Own a house	6
Other (Please Specify) _____	7



30. Please answer either A or B. Please read both before answering.

A. If you are renting the house in which you live, about how much money per month do you pay for rent? (Write amount in box).

B. If you own the house in which you live (house, apartment, or other), about how much money per month do you believe you could rent the house for? (Write amount in box).

31. In every community each group (for example, schools, businessmen, labor, the local government) has a different job to do for the community. In your community, would you say that the schools are doing an excellent, good, fair, or poor job? How about businessmen? Labor? The local government? The doctors and hospitals? The church? (Please circle the appropriate number to indicate how you feel each job is being done). Please answer for each group.

A. Elementary Schools

Do not know 1

Poor 2

Fair 3

Good 4

Excellent 5

B. Secondary Schools

Do not know 1

Poor 2

Fair 3

Good 4

Excellent 5



31. Continued from Page 11. The instructions on the previous page apply to the following sections, C through E.

C. Universities

Do not know 1
Poor 2
Fair 3
Good 4
Excellent 5

D. Businessmen

Do not know 1
Poor 2
Fair 3
Good 4
Excellent 5

E. Labor

Do not know 1
Poor 2
Fair 3
Good 4
Excellent 5

31. Continued from Page 12. The instructions on Page 11 apply to the following sections, F through I.

F. Local Government

Do not know 1
 Poor 2
 Fair 3
 Good 4
 Excellent 5

G. National Government

Do not know 1
 Poor 2
 Fair 3
 Good 4
 Excellent 5

H. Health Services (Doctors and Hospitals)

Do not know 1
 Poor 2
 Fair 3
 Good 4
 Excellent 5

I. Churches

Do not know 1
 Poor 2
 Fair 3
 Good 4
 Excellent 5



32. How long have you lived in your present community?

- Less than 1 year 1
- From 1 to 2 years 2
- From 3 to 6 years 3
- From 7 to 10 years 4
- Over 10 years 5

33. Have you changed your residency (from one community to another) during the past two years? Please circle the correct number.

- Yes 1
- No 2

34. Have you changed your employment during the past two years? Please circle the correct number.

- Yes 1
- No 2

35. About how many times have you changed residency (communities) during the past 10 years? Please circle the correct number.

- None 1
- 1 Time 2
- 2 3 Times 3
- 4 6 Times 4
- 7 10 Times 5
- Over 10 Times 6



36. About how many times have you changed jobs during the past 10 years? Please circle the correct number.

None 1
1 Time 2
2 - 3 Times 3
4 - 6 Times 4
7 - 10 Times 5
Over 10 Times 6

37. Please state your occupation. Briefly state the title or name of your job and the nature of your work.

38. In respect to your religion, about to what extent do you observe the rules and regulations of your religion? Please circle the correct number.

I have no religion 1
Seldom 2
Sometimes 3
Usually 4
Almost always 5



39. Health experts say adding certain chemicals to drinking water results in less decay in people's teeth. If you could add these chemicals to your water with little cost to you, would you be willing to have the chemicals added? Please circle the correct number.

Probably not 1
No 2
Maybe 3
Yes 4

40. Some people feel that in bringing up children, new ways and methods should be tried whenever possible. Others feel that trying out new methods is dangerous. What is your feeling about the following statement?

"New methods of raising children should be tried out whenever possible."

Strongly disagree 1
Slightly disagree 2
Slightly agree..... 3
Strongly agree 4

41. Family planning on birth control has been discussed by many people. What is your feeling about a married couple practicing birth control? Do you think they are doing something good or bad? If you had to decide, would you say they are doing wrong, or rather, that they are doing right?

It is always right 1
It is probably all right 2
It is usually wrong 3
It is always wrong 4



42. People have different ideas about what should be done concerning automation and other new ways of doing things. How do you feel about the following statement?

"Automation and similar new procedures should be encouraged (in government, business, and industry) since eventually it creates new jobs and raises the standard of living."

Disagree Strongly 1
Disagree Slightly 2
Agree Slightly 3
Agree Strongly 4

43. Running a village, city, town, or any governmental organization is an important job. What is your feeling on the following statement?

"Political leaders should be changed regularly, even if they are doing a good job."

Strongly disagree 1
Slightly disagree 2
Slightly agree 3
Strongly agree 4

44. Some people believe that more local government income should be used for education even if doing so means raising the amount you pay in taxes. What are your feeling on this?

Strongly disagree 1
Slightly disagree 2
Slightly agree 3
Strongly agree 4



45. Some people believe that more federal government income should be used for education even if doing so means raising the amount you pay in taxes. What are your feelings on this?
- Strongly disagree 1
- Slightly disagree 2
- Slightly agree 3
- Strongly agree 4
46. People have different ideas about planning for education in their nation. Which one of the following do you believe is the best way? Answer only one.
- Planning for education should be left entirely to the parents 1
- Educational planning should be primarily directed by the individual city or other local governmental unit ... 2
- Education planning should be primarily directed by the national government 3
47. Some people are more set in their ways than others. How would you rate yourself? Please circle the number of your choice.
- I find it very difficult to change 1
- I find it slightly difficult to change 2
- I find it somewhat easy to change my ways 3
- I find it very easy to change my ways 4
48. I find it easier to follow rules than to do things on my own.
- Agree strongly 1
- Agree slightly 2
- Disagree slightly 3
- Disagree strongly 4



49. I like the kind of work that lets me do things about the same way from one week to the next. Circle the number of your choice.

Agree strongly 1

Agree slightly 2

Disagree slightly 3

Disagree strongly 4

50. A good son will try to find work that keeps him near his parents even though it means giving up a good job in another part of the country.

Agree strongly 1

Agree slightly 2

Disagree slightly 3

Disagree strongly 4

51. We should be as helpful to people we do not know as we are to our friends.

Disagree strongly 1

Disagree slightly 2

Agree slightly 3

Agree strongly 4



52. Planning only makes a person unhappy because your plans hardly ever work out anyway.

Agree strongly 1
Agree slightly 2
Disagree slightly 3
Disagree strongly 4

53. Which one of the following requisities do you consider most important to make your life more happy and satisfactory in the future? Circle the single, most important choice.

Nothing 1
More money 2
More friends 3
Better job 4
Good health 5
Other (Please Specify) _____ 6

54. What do you think you can do to make this possible? Please answer one of the two alternatives below.

Nothing _____

Please Specify _____



APPENDIX B

Instrumentation

B-4 Attitudes Toward
Handicapped Persons



No. _____

Location _____

Male _____

Group _____

Female _____

Date _____

HANDICAPPED PERSONS SCALE

Instructions: Given below are 20 statements of opinion about physically handicapped persons. We all think differently about persons with physical handicaps. Here you may express how you think by choosing one of the four possible answers following each statement. These answers indicate how much you agree or disagree with the statement. Please mark your answer by placing a circle around the number in front of the answer you select.

You are also asked to indicate for each statement how strongly you feel about your marking of the statement. Please mark this part of your answer in the same way as before, by placing a circle around the number in front of the answer you select.

1. Parents of handicapped children should be less strict than other parents.

1. Strongly disagree

3. Agree

2. Disagree

4. Strongly agree

About how strongly do you feel about your answer?

1. Not strongly at all

3. Fairly strongly

2. Not very strongly

4. Very strongly

2. Physically handicapped persons are just as intelligent as non-handicapped ones.

1. Strongly disagree

3. Agree

2. Disagree

4. Strongly agree

About how strongly do you feel about your answer?

1. Not strongly at all

3. Fairly strongly

2. Not very strongly

4. Very strongly



No. _____

2

ATDP

3. Handicapped people are usually easier to get along with than other people.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

4. Most physically handicapped people feel sorry for themselves.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

5. Physically handicapped people are the same as anyone else.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |



No. _____

3

ATDP

6. There shouldn't be special schools for physically handicapped children.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

7. It would be best for physically handicapped persons to live and work in special communities.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

8. It is up to the government to take care of physically handicapped persons.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |



No. _____

4

ATDP

9. Most physically handicapped people worry a great deal.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

10. Physically handicapped people should not be expected to meet the same standards as non-handicapped people.

- | | |
|----------------------|-------------------|
| 1. Strongly Disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

11. Physically handicapped people are as happy as non-handicapped ones.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |



No. _____

5

ATDP

12. Severely physically handicapped people are no harder to get along with than those with minor handicaps.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

13. It is almost impossible for a handicapped person to lead a normal life.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

14. You should not expect too much from physically handicapped people.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |



No. _____

6

ATDP

15. Physically handicapped people tend to keep to themselves much of the time.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

16. Physically handicapped people are more easily upset than non-handicapped people.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

17. Physically handicapped persons cannot have a normal social life.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |



No. _____

7

ATDP

18. Most physically handicapped people feel that they are not as good as other people.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

19. You have to be careful of what you say when you are with physically handicapped people.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 3. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

20. Physically handicapped people are often grouchy.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |



APPENDIX B

Instrumentation

B-5 Definitions of
Disabling Conditions



DEFINITIONS

What is meant by "physical handicap."

The words "physically handicapped" will be used often in the questions and statements that follow. Where these words are used, they will include persons with any of the following handicaps:

1. blind persons--those who have no useful sight at all.
2. partly blind persons--those who have some sight but have trouble reading and getting about even with glasses.
3. deaf persons--those who have no useful hearing at all.
4. partly deaf persons--those who have some hearing but have trouble understanding other persons even with a hearing aid.
5. cripples or amputees--those who have arms or legs that have been paralyzed or removed even though they may be of some use with artificial hands or legs.
6. spastic (or cerebral palsy)--those who have poor control and coordination of their leg, arm, and head movements. Movements are often jerky and speech hard to understand.
7. disfigured--those who have been obviously damaged about the face, such as with burns or scars, so that the face has been changed.



APPENDIX B

Instrumentation

B-6 Personal Questionnaire:
HP



No. _____

Location _____

Male _____

Group _____

Female _____

Date _____

PERSONAL QUESTIONNAIRE: HP

This questionnaire deals with your contacts with physically handicapped persons, and what you know about them. Perhaps you have had much contact with physically handicapped persons, or you may have studied about them. On the other hand, you may have had little or no contact with physically handicapped persons, and may have never thought much about them at all.

For the purposes of this investigation, the answers of all persons are important, so even if you know very little or nothing about physically handicapped persons your answers are important.



PERSONAL QUESTIONNAIRE: HP

Please read each question carefully and do not omit any questions.

Please answer by circling the correct answer (or answers) or fill in the answer as requested.

1. Some physically handicapping conditions are listed below. In respect to these various handicaps, which have you had the most actual experience with. Please answer by circling the number of the group you select. Circle only one.

- | | |
|--------------------------------|---|
| 1. blind | 6. disfigured (such as severe burns or scars on face) |
| 2. partially blind | 7. spastic (or cerebral palsy) |
| 3. deaf (and deaf-mute) | 8. speech disorders |
| 4. partially deaf | 9. none |
| 5. crippled or amputated limbs | |

2. Which other groups have you also had some experience with? Please circle the number of each additional group with which you have had some experience.

- | | |
|--------------------------------|---|
| 1. blind | 6. disfigured (such as severe burns or scars on face) |
| 2. partially blind | 7. spastic (or cerebral palsy) |
| 3. deaf (and deaf-mute) | 8. speech disorders |
| 4. partially deaf | 9. none |
| 5. crippled or amputated limbs | |

If on the preceding question you indicated that you have had no personal experience with physically handicapped persons (by circling response No. 9, please skip questions #3 through #9. If you indicated that you have had the experience with one or more of the above handicapping conditions, please answer questions #3 through #9.



3. The following questions have to do with the kinds of experiences you have had with physically handicapped persons. Please circle the number of each experience that applies to you. If more than one experience applies, please circle a number for each experience that applies.

I have read or heard a little about physically handicapped persons 1

I have studied about physically handicapped persons through reading, movies, lectures, or observations .. 2

A friend is physically handicapped 3

Some relative is physically handicapped 4

I have personally worked with physically handicapped persons, as a teacher, counselor, volunteer, child care, etc. 5

My father, mother, brother, sister, wife (husband) or child is physically handicapped 6

I, myself, have a physical handicap. (Briefly, please indicate the kind of handicap) 7

4. Considering all of the times you have talked, worked, or in some other way had personal contact with physically handicapped persons, about how many times has it been altogether? Please circle the number of the single best answer.

Less than 10 occasions 1

Between 10 and 50 occasions 2

Between 50 and 100 occasions 3

Between 100 and 500 occasions 4

More than 500 occasions 5



5. When you have been in contact with physically handicapped people, how easy for you, in general, would it have been to have avoided being with these handicapped persons?

I could generally have avoided these personal contacts only at great cost or difficulty 1

I could generally have avoided these personal contacts only with considerable difficulty 2

I could generally have avoided these personal contacts but with some inconvenience 3

I could generally have avoided these personal contacts without any difficulty or inconvenience 4

6. During your contact with physically handicapped persons, did you gain materially in any way through these contacts, such as being paid, or gaining academic credit, or some such gain?

No, I have never received money, credit, or any other material gain 1

Yes, I have been paid for working with handicapped persons 2

Yes, I have received academic credit or other material gain 3

Yes, I have both been paid and received academic credit 4



7. If you have never been paid for working with handicapped persons, go on to the next question. If you have been paid, about what per cent of your income was derived from contact with physically handicapped persons during the actual period when working with them?

Less than 10% 1
Between 10 and 25% 2
Between 25 and 50% 3
Between 50 and 75% 4
More than 75% 5

8. How have you generally felt about your experience with handicapped persons?

I definitely have disliked it 1
I have not liked it very much 2
I have liked it somewhat 3
I have definitely enjoyed it 4

9. If you have ever worked with the physically handicapped for personal gain (for example, for money, or some other gain), what opportunities did you have (or do you have) to work at something else instead; that is, something else that was (or is) acceptable to you as a job?

I do not know what other jobs were available or acceptable 1
No other job was available 2
Other jobs available were not at all acceptable to me . 3
Other jobs available were not quite acceptable to me .. 4
Other jobs available were fully acceptable to me 5



The following questions should be answered
by all persons, regardless of whether or
not they have had any personal contact with
persons who are physically handicapped.

10. Have you had any experience with mentally retarded persons?
Considering all of the times you have talked, worked, or in
some other way had personal contact with mentally retarded
persons, about how many times has it been altogether?
Please circle the number of the single best answer.

Less than 10 occasions 1
Between 10 and 50 occasions 2
Between 50 and 100 occasions 3
Between 100 and 500 occasions 4
More than 500 occasions 5

11. Have you had any experience with emotionally ill persons?
Considering all of the times you have talked, worked, or in
some other way had personal contact with emotionally ill
persons, about how many times has it been altogether?
Please circle the number of the single best answer.

Less than 10 occasions 1
Between 10 and 50 occasions 2
Between 50 and 100 occasions 3
Between 100 and 500 occasions 4
More than 500 occasions 5



APPENDIX C

C-1 Basic Variables of the Study



APPENDIX C

Variables, Administration Procedures, Code Book, and Code Forms

1. Basic Variables of the Study
2. Administration Procedures
3. Code Book
4. Special Instructions for Colombia
5. Special Instructions for Peru
6. Special Instructions for Kansas
7. Data Transcription Sheet
8. FCC I and II Variable-Computer Print-Out Code
Form for Colombia, Peru, and Kansas (i.e. Friesen)
9. Religiosity



APPENDIX C

C-1 Basic Variables of the Study



A. Attitudes Toward Education

- 1 Traditional attitudes, Items 3, 4, 6, 10, 11, 12, 13, 14, 18, 19 - Content
Raw Score total
Adjusted total score (dichotomized)
- 2 Traditional attitudes, Items 3, 4, 6, 10, 11, 12, 13, 14, 18, 19 - Intensity
Raw Score total
Adjusted total score (dichotomized)
- 3 Progressive attitudes, Items 1, 2, 5, 7, 8, 9, 15, 16, 17, 20 - Content
Raw Score total
Adjusted total score (dichotomized)
- 4 Progressive attitudes, Items 1, 2, 5, 7, 8, 9, 15, 16, 17, 20 - Intensity
Raw Score total
Adjusted total score (dichotomized)

B. Contact with Education (Q'aire)

- 1 Levels of education experienced
Q'aire, Item 1 (primary contact)
Q'aire, Item 2 (additional contacts - no. kinds of)
- 2 Varieties of contact with education
Q'aire, Item 3
- 3 Amount of contact (work) with education
Q'aire, Item 4
- 4 Personal gain through working in education
Q'aire, Item 5 (% of income)
- 5 Alternative opportunities available
Q'aire, Item 7 (refers to other possible employment)
- 6 Enjoyment of contact
Q'aire, Item 6

C. Aid to Education - Financial (Q'aire)

- Item 44 (local)
- Item 45 (federal or national)

D. Education Planning (Q'aire)

Item 46

E. Interpersonal Values - Gordon Scale

- 1 S scores: Support
- 2 C scores: Conformity
- 3 R scores: Recognition (comparative score)
- 4 I scores: Independence
- 5 B scores: Benevolence (asset score)
- 6 L scores: Leadership (comparative score)

F. Demographic, S.E.S., Other Control Data (All from Q'aire)

- 1 Education (self-amount), Item 26
- 2 Occupation (specific), Item 37
- 3 Income and rental (S. E. Class)
Item 14 (income - yearly, self-family)
Item 30 (rental)
- 4 Age: Item 8
- 5 Sex: Front sheet of questionnaire
- 6 Marital status: Item 12
- 7 Number of children: Item 13
- 8 Size of family:
Item 16 (brothers - do not use)
Item 17 (sisters - do not use)
Items 16 and 17 (siblings)
- 9 Housing (type of), Item 29
- 10 Mobility: Residency, Items 32, 33 and 35
Card 4, Col. 25
Occupational, Items 34 and 36
- 11 Rural-Urban Status: Items 9, 10 and 11
- 12 Employment status - current: Item 37

G. Satisfaction with institutions (Q'aire)

- 1 Satisfaction with elementary schools
Item 31-A
- 2 Satisfaction with secondary schools
Item 31-B
- 3 Satisfaction with universities
Item 31-C



- 4 Satisfaction with businessmen
Item 31-D
- 5 Satisfaction with labor
Item 31-E
- 6 Satisfaction with local government
Item 31-F
- 7 Satisfaction with national government
Item 31-G
- 8 Satisfaction with health services
Item 31-H
- 9 Satisfaction with churches
Item 31-I

H. Self-Statements (Q'aire)

- 1 Comparative income status - self: Item 15
- 2 Comparative income - father: Item 18
- 3 Comparative social class - self: Item 24
- 4 Comparative social class - father: Item 25
- 5 Comparative education - self: Item 27
- 6 Comparative education - father: Item 28

I. Religiosity Questionnaire (Q'aire)

- 1 Religious affiliation: Item 19
- 2 Perceived importance: Item 20
- 3 Perceived norm conformity: Item 38

J. Personalism Questionnaire (Q'aire)

- 1 Orientation toward job personalism
 - a Statement of extent of personalism on job: Item 21
 - b Perceived importance of personal relations: Item 22
- 2 Diffusion of personal relationships
Percent of job-social overlap: Item 23
- 3 Familialism: Item 50, (Son's work)
- 4 Other orientation: Altruism: Item 51

K. Attitudes Toward Change (Q'aire)

- 1 Health practices (water): Item 29
- 2 Child-rearing practices: Item 40
- 3 Birth control practices: Item 41



- 4 Political leadership change: Item 43
- 5 Automation: Item 42
- 6 Self Conception
 - Item 47 (Perceived self-rigidity)
 - Item 48 (Adherence to rules)
 - Item 49 (Job regularity and rigidity)
- 7 Future orientation
 - Item 52 (Planning - personal)
 - Item 53 (Requisites for happiness)
 - Item 54 (Achievement of happiness)

L. Attitudes Toward Handicapped Persons

- 1 Handicapped Persons Scale, Items 1-20 - Content
 - Raw Score total
 - Adjusted total score (dichotomized)
- 2 Handicapped Persons Scale, Items 1-20 - Intensity
 - Raw Score total
 - Adjusted total score (dichotomized)

M. Contact with Handicapped Persons

- 1 Kinds of handicapped persons experienced
 - P.Q.-HP, Item 1 (most contact)
 - P.Q.-HP, Item 2 (additional contacts - no. of)
- 2 Varieties of relationship with handicapped
 - P.Q.-HP, Item 3
- 3 Frequency of contact with physically handicapped
 - P.Q.-HP, Item 4
- 4 Ease of avoidance of contacts with handicapped
 - P.Q.-HP, Item 5
- 5 Personal gain through working with handicapped persons
 - P.Q.-HP, Item 6 (experienced gain)
 - P.Q.-HP, Item 7 (% of income)
- 6 Alternative opportunities available
 - P.Q.-HP, Item 9 (refers to other possible employment)
- 7 Enjoyment of contact with physically handicapped
 - P.Q.-HP, Item 8
- 8 Frequency of contact with mentally retarded persons
 - P.Q.-HP, Item 10
- 9 Frequency of contact with emotionally disabled persons
 - P.Q.-HP, Item 11



APPENDIX C

C-2 Administration Procedures



PROCEDURES FOR ADMINISTRATION:

CROSS-CULTURAL ATTITUDE STUDY

34
John E. Jordan
Michigan State University
East Lansing, Michigan
December, 1964

The specific instructions will vary in detail from nation to nation. However, the following outline is presented on the basis of my experience thus far with the questionnaires and attitude scales.

1. Arrange for a meeting room and/or place. The respondents should have a table (or similar surface) on which to write and ample room between respondents (in group administration) to minimize influencing each other.
2. After introducing oneself (or being introduced), state briefly the following kind of rationale for the study:

"This is an international study of attitudes toward education; part of it deals with education in general and part of it deals with the education of handicapped persons. Each part is clearly stated. Remember, in a study like this, there are no right or wrong answers to the attitude questions. We want you to answer how you feel about certain things. Therefore, we do not want your name on the questionnaire. Please answer quickly, with your first idea first, and do not spend a lot of time thinking about each item.

Remember this is an international study and all the people in the other countries will be answering in the same manner. If there is no answer that exactly fits what you would like to answer, please choose the alternative nearest to your desired answer.

Please answer all items.



If you have any questions as you proceed, please raise your hand and we will come to you and discuss it individually so as not to disturb the other people. When we have all completed the questionnaires, I will be glad to discuss the study in more detail if you desire. Thank you very much for taking time to cooperate in the study."

3. Distribute the page of definitions.

"We will now distribute to you a page of definitions of certain handicapping conditions which will be referred to in some of the questionnaires. We will all take a few minutes to read these so we will all have the same idea about the same words. You may refer to these later if you so desire.

Also, we want you to put a number in the upper left hand corner of the page like this (show them what you mean). Since we do not want you to put your name on the questionnaire, you will use this number. In this manner no one will know your answers. We must have your number and group (special education, teacher, business, etc.) on each questionnaire so we can put all the answers of one person together at the end."

Here the respondents "number off" and see that no two persons have the same number. Remember if two people in a group have the same number, the data cannot be analyzed.

4. Distribute the attitude scales and questionnaires in the following order. In group administration be sure to pass out only one instrument at a time.

Order of Administration of Instruments

1. Page of definitions
2. Education Scale
3. Survey of Interpersonal Values
4. Personal Questionnaire
5. Handicapped Persons Scale
6. Personal Questionnaire: HP



5. Distribute the Education Scale. Have the respondent fill out data on the top of scale: (1) Number, (2) Sex, (3) Location, (4) Group, and (5) Date. Either instruct the respondents to read silently the instructions or the administrator may read them to the group; this is left to each country to do in the manner they consider most appropriate. Our experience shows that if the instructions are well understood on this first instrument, the other instruments are easily understood.

When the respondents have completed the Education Scale, collect them and distribute the next one as indicated above in Point Number Four. Proceed in a similar manner until all five instruments have been completed.

6. If situations arise where the instruments are left with the respondent (i.e., either in an office or to take home), try to impress on them the order in which to take them (e.g., number them 1-2-3-4-5 in the upper right hand corner) and not to look at them ahead of time.

Do not leave instruments with respondents except when absolutely necessary and in such cases mark on them later to indicate they were given in this manner.

7. Respondent identification. See discussion under Points Numbered 3 and 6 above. Remember we need a minimum of 50 persons per each of the four groups: (1) special education, (2) teacher-primary and secondary, (3) workers-blue and white collar, and (4) employers-business, commerce, industry. We would prefer to have more so secure as many as you can conveniently locate up to 100 per group. Each of these respondents must fill out all five instruments, using the same respondent number and group. If either the respondent number or group is omitted or duplicated, the data cannot be collated for data analysis!

8. When you have secured enough completed sets of instruments for a "usual size" mailing package in your country, please mail to me rather than waiting to send all of them at one time. In this manner I can have the data scored and tabulated for computer processing in an orderly manner. If I receive all the data at one time, it will be difficult to hire assistants here at the university on any regular basis. Each time you mail a package of data, you should send me a letter describing it so I can keep records.



APPENDIX C

Variables, Code Book, and Transcription Sheets

C-3 Code Book

CODE BOOK

CROSS CULTURAL ATTITUDES TOWARD EDUCATION: THEIR NATURE AND DETERMINANTS

INTERNATIONAL STUDY*

John E. Jordan
College of Education
Michigan State University
August 25, 1965

INSTRUCTIONS FOR THE USE OF THIS CODE BOOK

1. Code 0 or 00 will always mean Not Applicable or Nothing, except as noted.
2. Code + for a one column no response, or -9 for a two column no response, or -99 for a three column no response will mean there was No Information or Respondent did not answer.
3. In each case in the following pages the column to the left contains the column number of the IBM card; the second column contains the question number from the questionnaire; the third column (item detail) contains an abbreviated form of the item; and the fourth column contains the code within each column of the IBM card with an explanation of the code. The fifth column (recode) is reserved to later indicate recoding after the item count is finished; i.e., after all data is key punched, run the data through the M.S.U. computer (ACT II, FCC, and/or Single-Column Frequency Distributions) to determine the patterns of response alternatives to a question. This will indicate if regrouping, etc., need to be considered for the item.
4. Coder instructions always follow a line across the page and are clearly indicated.
5. In some cases when codes are equal to others already used, they are not repeated each time, but reference is made to a previous code or the immediately previous code with "same".
6. Under Code, the first number is the questionnaire question alternative and the second number is the actual code which is entered on the data sheets (i.e., 1-4; one 1 is the questionnaire question alternative and 4 is the code).

* This code book is specifically for the United States sample thru Card 4. Limited modifications and/or additions are made in certain nations and/or states. Special instructions are appended for each study before scoring that sample.



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
1,2,3 Face Sheet	Nation and Location	<u>UNITED STATES</u> 001 - Mich., Mt. Pleasant 002 - Mich., Cadillac 003 - Mich., Ann Arbor 004 - Mich., Port Huron 005 - Mich., Lansing 006 - Mich., Walden Woods 007 - Mich., Flint 008 - Mich., Misc., Kal., Mid. 009 - Kansas, Wichita 010 - Ohio, Tiffin 011 - West Virginia 012 - Kentucky 013 - Georgia <u>LATIN AMERICA</u> 101 - Costa Rica 102 - Colombia 103 - Peru 104 - Argentina 105 - Mexico 106 - Surinam <u>EUROPE</u> 201 - England 202 - Holland 203 - Belgium 204 - France 205 - Yugoslavia 206 - Denmark 207 - Germany <u>ASIA</u> 301 - Israel 302 - Japan 303 - India 304 - Formosa <u>AFRICA</u> 401 - Kenya 402 - Rhodesia 403 - South Africa	



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
4,5	Face Sheet	Group Number (adminis- tration)	01 - 99 Check Special Instructions
6,7	Face Sheet	Respondent Number	01 - 99
8	Face Sheet	Sex of Respondent	1 - Masculine 2 - Feminine
9	(Code derived from Col's 22, 23, Card 1)	Occupational Recode (Interest group)	1 - Code 01 - 09, Rehab., Spec. Ed. 2 - Code 10 - 19, Education 3 - Code 20 - 45, Profes- sional, Business, Medical 4 - Code 50 - 86, White Col- lar, Blue Collar, Laborer
10	New	Occupational Recode (Spec. Ed., Rehab. SER)*	1 - Teacher, Educable Retarded, (Type A and Type C) 2 - Teacher, Trainable Retarded (Type B) 3 - Teacher, Hearing 4 - Teacher, Vision 5 - Speech Correction 6 - Visiting Teacher (Also Social Worker) 7 - Diagnostician 8 - Other (Professors, Supts., Administrators, etc.) + - Non-teacher
11,12	Face Sheet	Deck or Card Number	01
13,14	Face Sheet	Project Director, location and con- tent area	<u>LATIN AMERICA</u> 01 Felty: Costa Rica (total - pilot study) 02 Friesen: Peru and Colombia (total) 03 Taylor: Costa Rica (country study)

* If respondent is not an SER
"educational person", he received
a +.
865

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
13,14 Face Sheet (continued)		<u>UNITED STATES</u>	
		31	Sinha: Ohio (parents-M. R., emot. dist. and normal)
		32	Dickie: Kansas (total and blind scale)
		33	Weir: Kansas (total and deaf scale)
		34	Mader: Michigan (special educ. - intra)
		35	Jordan: Michigan - Mt. Pleasant (Spec. Ed.)
		<u>ASIA</u>	
		51	Cessna: Japan (total plus university students and government employees)
		<u>EUROPE</u>	
		71	Boric: Yugoslavia (total)
		72	Fabia: France (total)
		73	Hansen: Denmark (total)
		74	Loring: England (total)
		75	Robaye: Belgium (total)
		76	Schweizer: Netherlands (total)
		77	Kreider: Europe (total)
15,16 Face Sheet	Day of Administration (Use the actual day)	01 to 31	
17,18 Face Sheet	Month of Administration	01 - January 02 - February 03 - March . .	

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
17,18 Face Sheet (continued)		10 - October 11 - November 12 - December	
19,20 Face Sheet	Year of Adminis- tration	64 - 1964 65 - 1965 66 - 1966 . . 70 - 1970	
21 Face Sheet	Type of Adminis- tration	1 - Group 2 - Self-administered 3 - Interview, individual + - No information	
22,23 37 Q'aire	Occupation of Respon- dent* (Spe- cific)	(01 - 09) Rehab. & Spec. Ed. 01 - All administrative persons, public and private schools or agencies 02 - Teachers, elem. and secondary academic and vocational 03 - School Special Services (Psych., soc. work, speech, etc.) 04 - University teachers, professors, researchers, specialists, etc. 05 - Medical (Doctors, Den- tists, etc.) 06 - Other professional (Psych., Soc. worker, Speech, etc., not pri- marily in public or private schools) 07 - Para-medical (Nurse, O.T., R.T., P.T., ect.) 08 - Unskilled Help (Hospital aide, janitor, any non- prof., non-tech. role) 09 - Other	

* See page 4-2
865



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
22,23 37 Q'aire (continued)	Occupation of Respon- dent* (Spe- cific)	<u>(10 - 19) Educational personnel other than Rehab. and Spec. Ed.</u>	
		10 - Elementary teachers, (include elem. v.p.'s, counselors, etc.)	
		11 - Secondary teachers	
		12 - Guidance and personnel workers (psych., social work, counselor if not elementary)	
		13 - Other special services (Speech, spec. teacher, audiometric, etc.)	
		14 - Administrative (elem., sec., central office adm., including elem. principal, sec. v.p. and princ., etc., in non-teach.)	
		15 - University teachers, professors, researchers, specialists, etc.	
		16 - 19 Open	
		<u>(20 - 29) Medical, other than Rehab. and Spec. Ed.</u>	
		20 - General practitioners	
		21 - Surgeons	
		22 - Psychiatrists or psycho- analysts	
		23 - Dentists	
		24 - All other medical spec- ialties	
		25 - Open	
		26 - Tech. and Prof.: Nurse, O.T., P.T., R.T., Audio, etc.	
		27 - Non-tech. and non-prof.: aide, janitor, attendant, etc.	
		28 - 29 Open	

* See page 4-2
865

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
22,23 37 Q'aire (continued)	Occupation of Respon- dent* (Spe- cific)	<u>(30 - 39) Professional and Technical, not Spec. Ed. and Rehab. or Medical or Educ.</u> 30 - Engineers (degrees): civil, electrical, mechanical, etc. 31 - Lawyers, attorneys, public accountants 32 - Ministers, clergymen 33 - Musicians 34 - Clinical psychologist 35 - Researchers, scientists, not primarily in education 36 - Social workers, etc. 37 - 39 Other <u>(40 - 45) Business and Industry, Managers, officials, prop.'s</u> 40 - Gov't and other bureau- cratic officials: public administrators and offi- cers, union officials, stage inspectors, public utility, telephone offic- ials, etc. 41 - Manufacturing, industrial officials, exec's, etc. 42 - Non-mfg., service, indus- try: bankers, brokers, insurance, real estate 43 - Retail trades: food, clothing, furniture, gaso- line, vehicle sales, etc. 44 - General: i.e., manager executive, etc., no other qualifications 45 - Open <u>(46 - 49) Farm owners, operators and managers of large farms, e.g., heavy equipment and/or many empl.</u>	

* See page 4-2

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
22,23 37 Q'aire (continued)	Occupation of Respon- dent* (Spe- cific)	46 - Farm owner 47 - Farm operator (renter) 48 - Farm manager 49 - Open	
		<u>(50 - 59) White Collar: office, clerical, etc.</u>	
		50 - Clerical and similar: tellers, bookkeepers, cashiers, secretaries, shipping clerks, attend- ants, telephone operators, library asst's, mail clerks and carriers, file clerks, etc.	
		51 - Sales workers: advertising, sales clerks, all mfg., wholesale, retail and other	
		52 - Small shopkeeper or dealer	
		54 - 59 Open	
		<u>(60 - 69) Blue Collar: crafts- men, foremen, and kindred work</u>	
		60 - Craftsmen: carpenters, bakers, electricians, plumbers, machinists, tailors, toolmakers, photographers, etc.	
		61 - Foremen: all construc- tion, mfg., transporta- tion and communication, and other industries	
		62 - Servicemen: telegraph, telephone, etc.	
		63 - Mechanics and repairmen	
		64 - Shoemakers, roofers, painters, and plasterers	
		65 - Merchant marine, sailors (non-military)	

* See page 4-2
865

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
22,23 37 Q'aire (continued)	Occupation of Respon- dent* (Spe- cific)	66 - Bus and cab drivers, motormen, deliverymen, chauffeurs, truck and tractor drivers 67 - Operatives of all other mech. equipment (machine, vehicle, misc. mfg.) 68 - 69 Open <u>(70 - 74) Serivce and Private Household workers)</u> 70 - Private household: laun- dress, housekeeper, cook 71 - Firemen and policemen, sheriffs, and baliffs 72 - Attendants, professional and personal (valet, mas- seur, misc. mfg.) 73 - Misc. attendents and services: hospital attendants, bootblacks, cooks 74 - Open <u>(75 - 79) Military Personnel</u> 75 - Ranking officers, all services (Navy Commander and up, Army and Marines Colonel and up) 76 - Junior Officers, Army and Air 77 - Junior Officers, Navy and Marines 78 - Non-commissioned personnel, Army and Air 79 - Non-commissioned personnel, Navy and Marines <u>(80 - 86) Laborers</u>	

* See page 4-2
865



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
22,23 37 Q'aire (continued)	Occupation of Respon- dent* (Spe- cific)	80 - Small farm owners, renters, and farm laborers (small farm has no heavy equipment, provides minimal income and substance, employs 3 or less persons, full or part time, except for migrant help)	
		81 - Non-mfg., non-industrial: fishermen, hunters, lumber- men, miners, gardeners, teamsters, garage laborers, etc.	
		82 - Manufacturing of durable goods: wood, clay, stone (stonecutter), metal, glass plastic, machinery, of all kinds	
		83 - Mfg. of non-durable goods: food (bakery, beverages, etc.), tobacco, clothing, cloth, paper, printing, chemicals, rubber, leather, etc.	
		84 - Non-mfg. industries: rail- road, construction, trans- portation, workers, etc.	
		85 - 86 Open	
		<u>(87) No employment</u>	
		87 - Persons that haven't worked, such as housewives, students or others who have never had a regular occupation	

* Instructions for Coder: OCCUPATIONS, COLUMNS 22-23. Coding information is derived from two sources:

1. Occupational description of groups as listed by the administrator.
2. Personal statements by the respondents in Question 37 of the questionnaire. Question 37 is the primary source of information. If vague or incomplete, score entirely from notes of administrator.

* See page 4-2

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
24	37 Q'aire	Current	1 - Employed or self-employed
		Employment	2 - Retired
		Status*	3 - Temporarily out of work
			4 - Housewife, but formerly employed
			5 - Unable to work (other than retired or housewife) but formerly employed
			6 - Student or persons trained for employment but not working for various reasons
25	1 thru	All ques-	1 - 1, strongly disagree
thru	20 <u>H-P</u>	tions in	2 - 2, disagree
44	<u>Content</u> **	handicap-	3 - 3, agree
		ped per-	4 - 4, strongly agree
		sons scale	
		are to be	
		scored from	
		<u>raw</u> data.	
		See instruc-	
		tions below.	

* Instructions for Coder: EMPLOYMENT STATUS, COLUMN 24. Code from questionnaire Question 37 if person clearly states employment status. If no employment stated, and no indication with certainty from the administrator, score ±.

** Instructions for Coder: HANDICAPPED PERSONS SCALE SCORING, COLUMNS 25-44.

NOTE: CERTAIN STEPS AND PROCEDURES ARE THE SAME FOR THE EDUCATION SCALE AS FOR THE HANDICAPPED PERSONS SCALE. THESE PROCEDURES WILL BE WRITTEN IN CAPITAL LETTERS.

The content part of the question is the first half of the question (i.e., the first score).

1. Reverse the content response numbering for the Handicapped Persons Scale (NOT the intensity response number) for items 2, 5, 6, 11, and 12, as follows:

The number of response 1 is changed to 4 and scored directly on data sheets.

<u>2</u>	<u>3</u>
<u>3</u>	<u>2</u>
<u>4</u>	<u>1</u>



- | <u>Column-Ques.</u> | <u>Item Detail</u> | <u>Code</u> | <u>Recode*</u> |
|---------------------|--------------------|-------------|----------------|
|---------------------|--------------------|-------------|----------------|
2. Special instructions for NO RESPONSE. Count the number of NO RESPONSE items, if more than 6 occur, do not score respondent for this scale. If there are 6 or less in total, and 3 or less in sequence, the NO RESPONSE statement is to be scored either 1 or 2 by the random procedure of coin flipping.

If a head is obtained, the score assigned will be 1.
If a tail is obtained, the score assigned will be 2.
 3. TOTAL THE RAW SCORES FOR EACH RESPONDENT AND WRITE THE TOTALS ON THE TRANSCRIPTION DATA SHEET DIRECTLY BELOW THE COLUMN TOTALED.*
 4. INTENSITY RAW SCORES FOR EACH STATEMENT ARE TO BE SCORED ON THE DATA SHEET EXACTLY AS THEY APPEAR ON THE QUESTIONNAIRE: i.e., IF 1 IS CIRCLED IN THE INTENSITY SECTION OF QUESTION ONE, SCORE IT AS 1 ON THE CORRESPONDING SECTION OF THE TRANSCRIPTION SHEET.
 5. Dichotomization Procedures (i.e., for MSA - applied to all scales).
 - a) Using raw data scores (i.e., the actual number circled by the respondent) via the Hafterson CUT Program on the M.S.U. CDC 3600, determine the point of least error for each item on the content scales.
 - b) Using this point (i.e., between 1 and 2, or between 2 and 3 or between 3 and 4) rescore the items, via recode cards, as 0, 1 via the Hafterson MSA Program on the M.S.U. CDC 3600 to determine which items form a scale. Run at both .01 and .05 level.
 - c) For Handicapped Persons Scale¹, items are scored 0 above the column break, 1 below the column break. For education Scale scoring, the reverse is true: items are scored 1 above the column break, 0 below the column break.
 - d) Using the same procedure in point 5-a above, determine the CUT points for the intensity component of each item.

* By this procedure, the possible range of scores is from 0 to 80. Doubling the obtained score will approximate scores obtained by the method of Yuker, et al., (1960, p. 10)

¹ HP scale, blind scale, and deaf scale.



- | <u>Column-Ques.</u> | <u>Item Detail</u> | <u>Code</u> | <u>Recode*</u> |
|---------------------|--|-------------|----------------|
| 5. | e) Enter the MSA Program with the <u>CUT points for the intensity component</u> and scale as in Point No. <u>5-b</u> for <u>content</u> . | | |
| | f) <u>Adjusted total scores for content and intensity</u> . Sum the dichotomized content and intensity scores (i.e., <u>0</u> , <u>1</u>) obtained by the above procedure for each respondent on these items that scaled for both content and intensity. Maximum score will be <u>1 x the number of the same items that scaled on both</u> content and intensity. | | |
| | g) Zero Point. Using only the items that scaled for both content and intensity, plot and determine the "zero point" for each <u>cultural group</u> (or other desired groupings) via the method detailed on pages 221-234 by Guttman (1950). | | |
| 6. | Dichotomization Procedure (alternative to no. 5 above). Attempt to program the <u>CUT</u> Program into the MSA so that both procedures under 5-a and b are conducted jointly. | | |

45	1 thru	Handicapped	1 - 1, not strongly at all
thru	20 <u>H-P</u>	Persons	2 - 2, not very strongly
64	<u>Intensity*</u>	Scale	3 - 3, fairly strongly
		<u>Intensity</u>	4 - 4, very strongly

- Except for NO RESPONSE, intensity scores are to be determined as noted in the preceding section regarding Content.
- Those scales which are rejected because of an excess of NO RESPONSE items in respect to content will of course also be rejected for intensity. Intensity questions which are unscored, but which occur when the content part of the question is scored, will be scored as follows:
 - If content score is 1 or 4, score intensity 4.
 - If content score is 2 or 3, score intensity just below the mean intensity score for that item; i.e. mean intensity of the group.

* Instructions for Coder: HANDICAPPED PERSONS SCALE, INTENSITY, COLUMNS 45-64. See instructions 1 and 2 above and 3 on the next page.

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
3.	Intensity questions which are unscored, and which occur when the content part of the question is <u>also unscored</u> , will be scored at the highest point below the respondent's own median on the other intensity questions in the questionnaire; i.e., if respondent generally scored intensity questions either <u>4</u> or <u>3</u> , so that the median was in between <u>3</u> and <u>4</u> , score NO RESPONSE <u>2</u> , and so forth.		
65 thru 74	3,4,6, 10,11 12,13 14,18 19*	Education Scale <u>Tradi-</u> <u>tional, Con-</u> <u>tent Respon-</u> <u>ses</u> **	1 - 1, strongly disagree 2 - 2, disagree 3 - 3, agree 4 - 4, strongly agree
1.	Items are to be scored on the transcription sheet as circled by the respondent.		
2.	Follow the procedures outlined in caps on Pages 1-10, 1-11, and 1-12 for the Handicapped Persons Scale. Be sure to <u>score only</u> those items indicated above as applying to the <u>education traditional scale, content</u> .		
<hr/>			
* The traditional and the progressive scales are both in the Kerlinger education scale but the responses are scored separately on the transcription sheet.			
** <u>Instructions for Coder: EDUCATION SCALE, TRADITIONAL, CONTENT, COLUMNS 65-74.</u> See instructions 1 and 2 on page 1-13.			

<u>Column-Ques.</u>		<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
1,2,3	Face Sheet	Nation and Location	Same as Card 1, page 1-1	
4,5	Face Sheet	Group Number	01 - 99	
6,7	Face Sheet	Respondent Number	01 - 99	
8	Face Sheet	Sex of Respondent	Same as Card 1, page 1-2	
9	37 Q'aire	Occupational Recode (Interest group)	Same as Card 1, page 1-2	
10	37 Q'aire	Occupational Recode (Spec. Ed.- Rehab. SER)	Same as Card 1, page 1-2	
11,12	Face Sheet	Deck or Card Number	02	
13,14	Face Sheet	Project Director	Same as Card 1, pages 1-2 and 1-3	
15,16	Face Sheet	Day of Administration	01-31	
17,18	Face Sheet	Month of Administration	01-12	
19,20	Face Sheet	Year of Administration	Same as Card 1, page 1-4	
21	Face Sheet	Type of Administration	Same as Card 1, page 1-4	

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
22,23 Face Sheet	Occupation of Respond- ent	Same as Card 1, pages 1-4 through 1-9	
24 Face Sheet	Current Employment Status	Same as Card 1, page 1-10	
25 3,4,6,10, thru 11,12,13, 34 14,18,19	Education Scale, <u>Tra-</u> <u>ditional</u> , <u>Intensity</u> Responses*	1 - 1, not strongly at all 2 - 2, not very strongly 3 - 3, fairly strongly 4 - 4, very strongly	
35 1,2,5,7, thru 8,9,15, 44 16,17,20	Education Scale, <u>Pro-</u> <u>gressive</u> , <u>Content</u> Responses**	1 - 1, strongly disagree 2 - 2, disagree 3 - 3, agree 4 - 4, strongly agree	

* Instructions for coder: EDUCATION SCALE, TRADITIONAL, INTENSITY, COLUMNS 24-33. Intensity questions are scored as indicated in caps on pages 1-11, 1-12 and 1-13 and as noted before, Handicapped Persons Scale, pages 1-10, 1-11 and 1-12, instructions 1 through 5.

** Instructions for Coder: EDUCATION SCALE, PROGRESSIVE, CONTENT, COLUMNS 34-43.

1. Items are to be scored exactly as circled.
2. Follow the procedures outlined in caps on pages 1-11, 1-12 and 1-13, Handicapped Persons Scale. Be sure to score only those items indicated above as belonging to the education progressive scale content.

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
45 thru 54	1,2,5,7, 8,9,15, 16,17,20 Education Scale, <u>Pro-</u> <u>gressive</u> <u>Intensity</u> Responses*	1 - 1, not strongly at all 2 - 2, not very strongly 3 - 3, fairly strongly 4 - 4, very strongly	
55-56	<u>Raw S</u> score Value scale, <u>Support</u> score**	01 - 32	
57-58	<u>Raw C</u> score Value scale, <u>Conformity</u> score**	01 - 32	
59-60	<u>Raw R</u> score Value scale, <u>Recognition</u> score** (comparative)	01 - 32	
61-62	<u>Raw I</u> score Value scale, <u>Indepen-</u> <u>dence</u> score**	01 - 32	
63-64	<u>Raw B</u> score Value scale, <u>Benevolence</u> score** (asset)	01 - 32	
65-66	Raw L score Value scale, Leadership score** (comparative)	01 - 32	

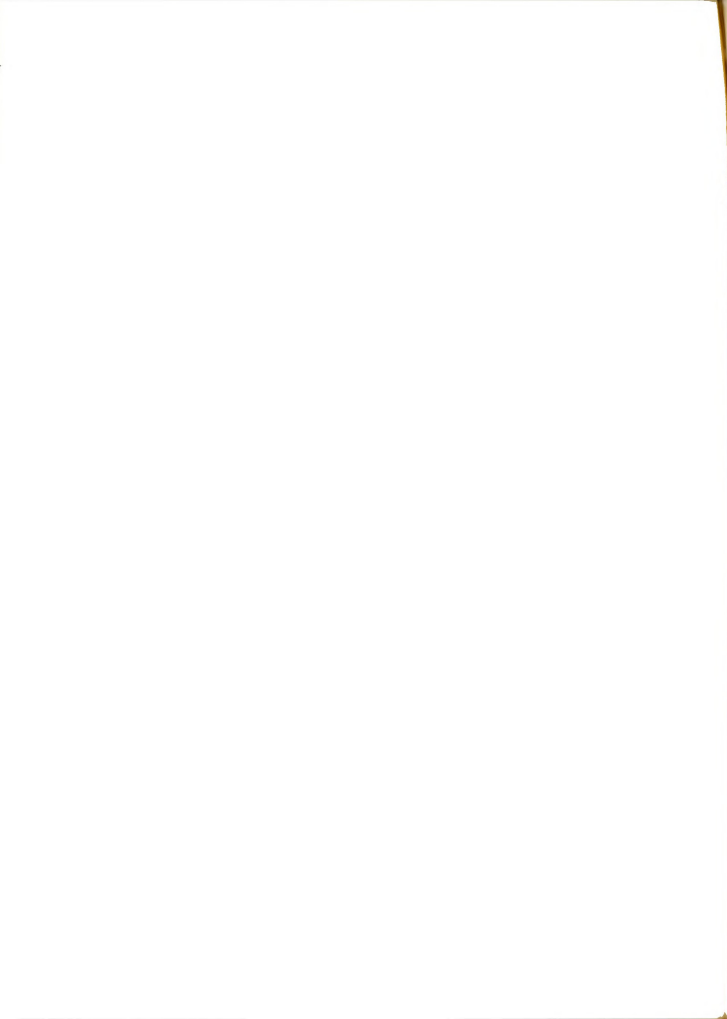
* Instructions for Coder: EDUCATION SCALE, PROGRESSIVE, INTENSITY, COLUMNS 44-53. Same as instructions for Education Scale, Progressive content, see page 2-2.

** Entries for columns 63-74 are obtained through scoring according to SRA Manual for Survey of Interpersonal Values, Science Research Associates, Inc., 259 East Erie Street, Chicago, Illinois, 1960. For scoring, coders should use the special keys adapted from the SRA English edition of the scale. Although the summed scores of the six value scales should total 90, scores between 84 and 95 are "acceptable."



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
67-68 Sum of item scores, 1-20, <u>Content</u>	Adjusted totals based on item dichotomization, <u>H.P. Scale, Content*</u>	(Check dich. for no. to use here) Code will be: <u>00</u> or <u>+9</u> to obtained score	
69-70 Sum of item scores, 1-20, <u>Intensity</u>	Adjusted totals based on item dichotomization, <u>H.P. Scale, Intensity*</u>	(Check dich. for no. to use here) Code will be: <u>00</u> or <u>+9</u> to obtained score	
71-72 Sum of item scores, 3, 4,6,10,11, 12,13,14, 18,19	Adjusted totals based on item dichotomization <u>Educational Traditional Scale, Content*</u>	(Check dich. for no. to use here) Code will be: <u>00</u> or <u>+9</u> to obtained score	
73-74 Sum of item scores, 3, 4,6,10,11, 12,13,14, 18,19	Adjusted totals based on item dichotomization <u>Educational Traditional Scale, Intensity*</u>	(Check dich. for no. to use here) Code will be: <u>00</u> or <u>+9</u> to obtained score	

* See Card 1, page 1-12, instruction no. 5-f, to ascertain how adjusted total scores are obtained.



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
75-76 Sum of item scores, 1, 2,5,7,8,9, 15,16,17,20	Adjusted totals based on item dichotomiza- tion <u>Educa-</u> <u>tion Progres-</u> <u>sive Scale,</u> <u>Content*</u>	(Check dich. for no. to use here) Code will be: <u>00</u> or <u>+9</u> to obtained score	
77-78 Sum of item scores, 1, 2,5,7,8,9, 15,16,17,20	Adjusted totals based on item dichotomiza- tion <u>Educa-</u> <u>tion Progres-</u> <u>sive Scale,</u> <u>Intensity*</u>	(Check dich. for no. to use here) Code will be: <u>00</u> or <u>+9</u> to obtained score	

* See Card 1, page 1-12, instruction No. 5-f, to ascertain how
adjusted total scores are obtained.

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
1,2,3	Face Sheet	Nation and Location	Same as Card 1, page 1-1
4,5	Face Sheet	Group Number	01-99
6,7	Face Sheet	Respondent Number	01-99
8	Face Sheet	Sex of Respondent	Same as Card 1, page 1-2
9	37 Q'aire	Occupational Recode (Interest group)	Same as Card 1, page 1-2
10	New	Occupational Recode (Spec. Ed.- Rehab. SER)	Same as Card 1, page 1-2
11,12	Face Sheet	Deck or Card Number	03
13,14	Face Sheet	Project Director	Same as Card 1, pages 1-2 and 1-3
15,16	Face Sheet	Day of Administration	01-31
17,18	Face Sheet	Month of Administration	01-12
19,20	Face Sheet	Year of Administration	Same as Card 1, page 1-4
21	Face Sheet	Type of Administration	Same as Card 1, page 1-4



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
22,23	Face Sheet	Occupation of Respond- ent	Same as Card 1, pages 1-4 through 1-9
24	Face Sheet	Current employment status	Same as Card 1, page 1-10
25,26	1 Q'aire	Contact group (Educ.)	<u>Primary</u> 1 - 01, Elem. School 2 - 02, Sec. School 3 - 03, University 4 - 04, Other as specified 5 - 05, No experience
27,28	2 Q'aire	Contact group (Educ.)	<u>Secondary</u> 1 - 01 2 - 02 3 - 03 SAME 4 - 04 5 - 05
29,30	3 Q'aire	Educational Contact (Varieties)	1 - 01 Know nothing about Ed 2 - 02 Read little about Ed 3 - 03 Studied about Ed 4 - 04 Neighbor works 5 - 05 Friend works 6 - 06 Relative works 7 - 07 Family works 8 - 08 I work in Ed 9 - 09 Other

-
- (1) If any combination of alternatives 1, 2 and 3 are circled, code as 10, Impersonal Contact
- (2) If any combination of alternatives 4-8 are circled, code as 11, Personal Contact.
- (3) If alternatives are circled in both division, code as 12, Both Impersonal and Personal Contact. This requires coding alternative OTHER (i.e., alternative 9) as either personal or impersonal contact; i.e., according to its content.



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
31	4 Q'aire	Amount of Contact (Educ.)	1 - 1, less than 3 months 2 - 2, 3 months to 6 months 3 - 3, 6 months to 1 year 4 - 4, 1 year to 3 years 5 - 5, 3 years to 5 years 6 - 6, 5 years to 10 years 7 - 7, over 10 years 8 - 8, over 15 years
32	5 Q'aire	Percent of income from Education	1 - 1, less than 10% 2 - 2, 10 to 25% 3 - 3, 25 to 50% 4 - 4, 50 to 75% 5 - 5, 75 to 100%
33	6 Q'aire	Enjoyment of Educational Work	1 - 2, disliked 2 - 3, not much 3 - 4, somewhat 4 - 5, enjoyed
34	7 Q'aire	Alternative work (to educ.)	1 - 1, no information 2 - 2, unavailable 3 - 3, not acceptable 4 - 4, not quite acceptable 5 - 5, acceptable
35,36	8 Q'aire	Age	20 - 20 years 21 - 21 years . . 40 - 40
37	9 Q'aire	Community in which reared. If more than one is checked try to determine in which one the respond- ent spent most of the time. If	1 - 1 country 2 - 2 country town 3 - 3 city 4 - 4 city suburb



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
37 9 Q'aire (continued)	impossible, try to choose a median (i.e. country, city, score country town)		
38 10 Q'aire	Employment community (recent)	1 - 1, country 2 - 2, country town 3 - 3, city 4 - 4, city suburb	
39 11 Q'aire	Recent Resi- dence	1 - 1, country 2 - 2, country town 3 - 3, city 4 - 4, city suburb	
40 12 Q'aire	Marital Status	1 - 1, married 2 - 2, single 3 - 3, divorced 4 - 4, widowed 5 - 5, separated	
41,42 13 Q'aire	Number of children. If blank, check Ques. 13. If single, score <u>00</u> ; if married, score <u>-9</u> .	1 - 01 2 - 02 3 - 03 · · 10 - 10	
43,44 14 Q'aire	Yearly Income (self-family) (for other nations see Special Instructions)	<u>UNITED STATES</u> 01 - less than \$1,000 02 - \$1,000 to \$1,999 03 - \$2,000 to \$2,999 · 10 - \$9,000 to \$9,999	



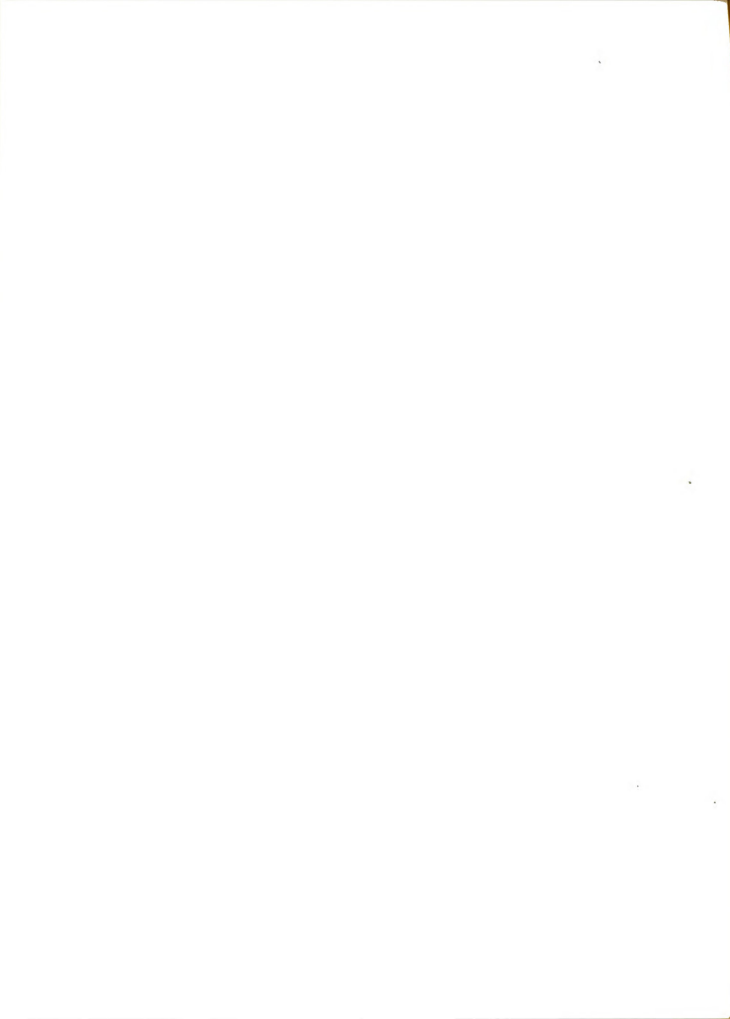
<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
45	15 Q'aire	Comparative Income (self-fam- ily)	1 - 1, much lower 2 - 2, lower 3 - 3, about the same 4 - 4, higher 5 - 5, much higher
46,47	16 Q'aire	Brothers. If the respondent answers only one question (17 or 18) and other is blank, assume it to be zero.	1 - 01 2 - 02 3 - 03 . . 10 - 10
48,49	17 Q'aire	Sisters	Same as number of brothers
51,51	None	Siblings - Obtain by summing above Ques- tions 16 and 17, Col's 45, 46 and 47, 48	1 - 01 . . 15 - 15
52	18 Q'aire	Fathers' Income: Comparative	1 - 1, much lower 2 - 2, lower 3 - 3, about the same 4 - 4, higher 5 - 5, much higher
53	19 Q'aire	Religious Affiliation	1 - 1, Roman Catholic 2 - 2, Protestant 3 - 3, Jewish 4 - 4, None 5 - 5, Other 6 to 9, Other major religions

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
54	20 Q'aire	Religion (Import- ance)	1 - 1, No religion 2 - 2, Not very 3 - 3, Fairly 4 - 4, Very
55	21 Q'aire	Personaliam (job-amount)	1 - 1, none 2 - 2, no contact 3 - 3, less than 10% 4 - 4, 10 to 30% 5 - 5, 30 to 50% 6 - 6, 50 to 70% 7 - 7, 70 to 90% 8 - 8, over 90%
56	22 Q'aire	Personalism (job-import- tance of)	1 - 1, not at all 2 - 2, not very 3 - 3, fairly 4 - 4, very
57	23 Q'aire	Personalism (job-diffu- sion)	1 - 1, none 2 - 2, less than 10% 3 - 3, 10 to 30% 4 - 4, 30 to 50% 5 - 5, 50 to 70% 6 - 6, 70 to 90% 7 - 7, over 90%
58	24 Q'aire	Social Class Position (Self)	1 - 1, lower 2 - 2, lower middle 3 - 3, middle 4 - 4, upper middle 5 - 5, upper
59	25 Q'aire	Social Class Position (Father)	Same as above



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
60	26 Q'aire	Education (Self-amount). If more than one is circled, choose the highest amount or determine the appropriate answer.	1 - 1, three years or less 2 - 2, six years or less 3 - 3, nine years or less 4 - 4, twelve years or less 5 - 5, some college 6 - 6, degree 7 - 7, work beyond degree 8 - 8, advanced degree
61	27 Q'aire	Education (Self-comparative)	1 - 1, much less 2 - 2, less 3 - 3, average 4 - 4, more 5 - 5, much more
62	28 Q'aire	Education (Father - comparative)	1 - 1, much less 2 - 2, less 3 - 3, average 4 - 4, more 5 - 5, much more
63	29 Q'aire	Housing (type of)	1 - 1, rent house 2 - 2, rent apartment 3 - 3, rent room 4 - 4, purchase room and board 5 - 5, own apartment 6 - 6, own house 7 - 7, other
64	30 Q'aire	Housing (rental-month) (for other nations see Special Instructions)	<u>UNITED STATES</u> 1 - \$20 or less 2 - 21 - 40 (dollars) 3 - 41 - 75 4 - 76 - 125 5 - 126 - 200 6 - 201 - 300 7 - 300 or more

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
65	31-A Q'aire Institutional	1 - 3 do not know	
	Satisfaction	2 - 1 poor	
	Elementary	3 - 2 fair	
	Schools	4 - 4 good	
		5 - 5 excellent	
66	31-B Q'aire Institutional	Same	
	Satisfaction		
	Secondary		
	Schools		
67	31-C Q'aire Institutional	Same	
	Satisfaction		
	Universities		
68	31-D Q'aire Institutional	Same	
	Satisfaction		
	Businessmen		
69	31-E Q'aire Institutional	Same	
	Satisfaction		
	Labor		
70	31-F Q'aire Institutional	Same	
	Satisfaction		
	Government		
	(local)		
71	31-G Q'aire Institutional	Same	
	Satisfaction		
	Government		
	(National)		
72	31-H Q'aire Institutional	Same	
	Satisfaction		
	Health		
	Services		
73	31-I Q'aire Institutional	Same	
	Satisfaction		
	Churches		



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
74	32 Q'aire	Residency (current length)	1 - 1, less than a year 2 - 2, one to two years 3 - 3, three to six years 4 - 4, seven to ten years 5 - 5, over ten years
75	33 Q'aire	Residency (change- recent)	1 - 1, yes 2 - 2, no



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
1,2,3	Face Sheet	Nation and Location	Same as Card 1, page 1-1
4,5	Face Sheet	Group Number	01 - 99
6,7	Face Sheet	Respondent Number	01 - 99
8	Face Sheet	Sex of Respondent	Same as Card 1, page 1-2
9	37 Q'aire	Occupational Recode (Interest group)	Same as Card 1, page 1-2
10	New	Occupational Recode (Spec. Ed.- Rehab. SER)	Same as Card 1, page 1-2
11,12	Face Sheet	Deck or Card Number	04
13,14	Face Sheet	Project Director	Same as Card 1, pages 1-3 and 1-3
15,16	Face Sheet	Day of Administration	01-31
17,18	Face Sheet	Month of Administration	01-12
19,20	Face Sheet	Year of Administration	Same as Card 1, page 1-4
21	Face Sheet	Type of Administration	Same as Card 1, page 1-4

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
22,23	Face Sheet	Occupation of Respond- ent	Same as Card 1, pages 1-4 through 1-9
24	Face Sheet	Current Employment Status	Same as Card 1, page 1-10
25	34 Q'aire	Job change (recent)	1 - 1, yes 2 - 2, no
26	35 Q'aire	Residency (change fre- quency) (i. e., last ten years)	1 - 1, none 2 - 2, one time 3 - 3, two to three times 4 - 4, four to six times 5 - 5, seven to ten times 6 - 6, over ten times
27	36 Q'aire	Job (change frequency) (i.e., last ten years)	1 - 1, none 2 - 2, one time 3 - 3, two to three times 4 - 4, four to six times 5 - 5, seven to ten times 6 - 6, over ten times
28,29	37 Q'aire	Occupation (Specific)	Same as Card 1, pages 1-4 through 1-9
30	38 Q'aire	Religiosity (norm con- formity)	1 - 1, no religion 2 - 2, seldom 3 - 3, sometimes 4 - 4, usually 5 - 5, almost always
31	39 Q'aire	Change Ori- entation (Health Practices)	1 - 1, no 2 - 2, probably not 3 - 3, maybe 4 - 4, yes
32	40 Q'aire	Change Ori- entation (Child Rearing)	1 - 1, strongly disagree 2 - 2, slightly disagree 3 - 3, slightly agree 4 - 4, strongly agree

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
33	41 Q'aire Change Ori- entation (Birth con- trol Prac- tices)	1 - 1, always right 2 - 2, usually right 3 - 3, probably wrong 4 - 4, always wrong	
34	42 Q'aire Change Ori- entation (Automation)	1 - 1, strongly disagree 2 - 2, slightly disagree 3 - 3, slightly agree 4 - 4, strongly agree	
35	43 Q'aire Change Ori- entation (Political Leaders)	1 - 1, strongly disagree 2 - 2, slightly disagree 3 - 3, slightly agree 4 - 4, strongly agree	
36	44 Q'aire Education (aid to - local)	1 - 1, strongly disagree 2 - 2, slightly disagree 3 - 3, slightly agree 4 - 4, strongly agree	
37	45 Q'aire Education (aid to - federal)	1 - 1, strongly disagree 2 - 2, slightly disagree 3 - 3, slightly agree 4 - 4, strongly agree	
38	46 Q'aire Education (planning responsi- bility)	1 - 1, only parents 2 - 2, only city or local government 3 - 3, primarily federal government	
39	47 Q'aire Change Ori- entation (self)	1 - 1, very difficult 2 - 2, somewhat difficult 3 - 3, slightly easy 4 - 4, very easy	
40	48 Q'aire Change Ori- entation (self-role adherence)	1 - 1, agree strongly 2 - 2, agree slightly 3 - 3, disagree slightly 4 - 4, disagree strongly	



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
41	49 Q'aire	Change Ori- entation (self- routine job)	1 - 1, agree strongly 2 - 2, agree slightly 3 - 3, disagree slightly 4 - 4, disagree strongly
42	50 Q'aire	Personalism (Famialism- Parental ties)	Same
43	51 Q'aire	Personalism (Other ori- entation)	1 - 1, disagree strongly 2 - 2, disagree slightly 3 - 3, agree slightly 4 - 4, agree strongly
44	52 Q'aire	Future Ori- entation (Planning)	1 - 1, agree strongly 2 - 2, agree slightly 3 - 3, disagree slightly 4 - 4, disagree strongly
45	53 Q'aire	Future Ori- entation (Happiness)	1 - 1, nothing 2 - 2, money 3 - 3, friends 4 - 4, job 5 - 5, health 6 - 6, other
46,47	54 Q'aire	Future Ori- entation (Happiness possibility)	01 - Nothing 02 - Marriage 03 - Divorce 04 - Friends 05 - Religion (Satisfaction with life) 06 - Money 07 - Job 08 - Education 09 - Health (Mental) 10 - Health (Physical) -9 - No response

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
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HANDICAPPED PERSONS QUESTIONNAIRE

48	1-Q-HP	HP Contact Group (Primary)	1 - 1, blind 2 - 2, partially blind 3 - 3, deaf (and mute) 4 - 4, partially deaf 5 - 5, crippled 6 - 6, disfigured 7 - 7, spastic 8 - 8, speech 9 - 0, none
49,50	2-Q-HP	HP Contact Group (Secondary)	00 If there was no contact to and questions are not answered score <u>0</u> . The score for this question is the <u>score</u> of the response alternatives circled, i.e., scores can range from <u>0</u> to <u>8</u> .
51,52	3-Q-HP	HP Contact (varieties)	1 - 01, Minimum knowledge 2 - 02, Studied about HP 3 - 03, Friend HP 4 - 04, Relative HP 5 - 05, Worked with HP 6 - 06, Family HP 7 - 07, Self is HP - 08) - 09)* See note below - 10)
53	4-Q-HP	HP Contact (amount)	1 - 1, less than ten 2 - 2, ten to fifty 3 - 3, fifty to 100 4 - 4, 100 to 500 5 - 5, over 500

* NOTE: If either or both alternatives 1 and 2 are circled, code as 08 - Impersonal contact. If either or all alternatives 3-7 are circled, code as 09 - Personal contact. If alternatives from both preceding divisions are circled, code as 10 - Impersonal and Personal contact.

<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
54	5-Q-HP	HP Contact (ease of avoidance)	1 - 1, great difficulty 2 - 2, considerable difficulty 3 - 3, some inconvenience 4 - 4, no inconvenience
55	6-Q-HP	HP Contact (gain from)	1 - 1, no rewards 2 - 2, paid 3 - 3, credit 4 - 4, paid and credit
56	7-Q-HP	HP Contact (% income)	1 - 1, less than 10% 2 - 2, 10 to 25% 3 - 3, 25 to 50% 4 - 4, 50 to 75% 5 - 5, over 75%
57	8-Q-HP	HP Contact (enjoyment)	1 - 1, disliked, great 2 - 2, disliked, little 3 - 3, liked, some 4 - 4, definitely enjoyed
58	9-Q-HP	HP Contact (alternatives to)	1 - 1, No information on alternatives 2 - 2, No other job available 3 - 3, Other available job <u>NOT</u> acceptable 4 - 4, Other available job acceptable
59	10-Q-HP	Contact (amount- M.R.)	1 - 1, less than 10 2 - 2, 10 to 50 3 - 3, 50 to 100 4 - 4, 100 to 500 5 - 5, over 500
60	11-Q-HP	Contact (amount- EDP)	Same



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
61,62 Sum of item scores 1-20 <u>Content</u>	Handicapped Persons Scale Total <u>Content Raw</u> Score, entry on trans- cription sheet	00-80	
63,64 Sum of item scores 1-20 <u>Intensity</u>	Handicapped Persons Scale Total <u>Intensity</u> <u>Raw</u> Score, entry on transcrip- tion sheet	00-80	
65,66 Sum of item scores 3, 4,6,10,11, 12,13,14, 18,19	Education Scale, <u>Tra-</u> <u>ditional</u> Total <u>Raw</u> <u>Content</u> score entry on transcrip- tion sheet	00-40	
67,68 Sum of item scores 3, 4,6,10,11, 12,13,14, 18,19	Education Scale, <u>Tra-</u> <u>ditional</u> Total <u>Raw</u> <u>Intensity</u> , score entry on transcrip- tion sheet	00-40	



<u>Column-Ques.</u>	<u>Item Detail</u>	<u>Code</u>	<u>Recode*</u>
69,70 Sum of item scores 1, 2,5,7,8, 9,15,16, 17,20	Education Scale, <u>Pro-</u> <u>gressive</u> Total <u>Raw</u> <u>Content</u> score entry on transcrip- tion sheet	00-40	
71,72 Sum of item scores 1, 2,5,7,8, 9,15,16, 17,20	Education Scale, <u>Pro-</u> <u>gressive</u> Total <u>Raw</u> <u>Intensity</u> score entry on transcrip- tion sheet	00-40	



APPENDIX C

C-4 Special Instructions
for Colombia

Code Book
Colombia (102)
(SPECIAL INSTRUCTION)

<u>Card/Col</u> ¹	<u>Ques.</u>	<u>Item Detail</u>	<u>Code</u> ²
<u>Card 3</u>			
3:43-44	14 Q'aire	Yearly Income	01 - under - 1,000 pesos 02 - 1,000 - 1,999 pesos 03 - 2,000 - 2,999 pesos 04 - 3,000 - 3,999 pesos to 20 - 19,000 - 19,999 pesos
3:64	30 Q'aire	Housing (rental-Month)	0 - under 100 pesos 1 - 100 - 299 pesos 2 - 300 - 499 pesos 3 - 500 - 699 pesos 4 - 700 - 899 pesos 5 - 900 - 1,099 pesos 6 - 1,100 - 1,299 pesos 7 - 1,300 - 1,499 pesos 8 - 1,500 - 1,699 pesos 9 - 1,700 and over

¹ The card/col designations refers to the location in the Code Book: International Study - 865.

² Designated changes and/or additions to the 865 Code Book. All Card designations over 4 will indicate additions. In such cases the full code will be given since it will be new and not contained in the 865 Code Book.

APPENDIX C

C-5 Special Instructions
for Peru



Code Book

Peru (103)

(SPECIAL INSTRUCTIONS)

<u>Card/Col</u> ¹	<u>Ques.</u>	<u>Item Detail</u>	<u>Code</u> ²
<u>Card 1</u>			
1:9		Occupational Recode (Interest Group)	0 - Special Education - Rehabilitation 2 - Managers/Executives 3 - Labor
<u>Card 3</u>			
3:43,44	14 Q'aire	Yearly Income	00 - below 5,000 soles 01 - 5,000 - 9,999 soles 02 - 10,000 - 14,999 soles 03 - 15,000 - 19,999 soles (in units of 5,000) 10 - 50,000 - 54,999 soles
3:64	30 Q'aire	Housing (rental- Month)	0 - below 500 soles 1 - 500 - 799 soles 2 - 800 - 1,099 soles 3 - 1,100 - 1,399 soles (etc.)
<u>Card 4</u>			
4:49,50	2 Q'aire- HP	Contact Group (secondary- HP)	Coding error - omit from analysis.

¹ The card/col designations refers to the location in the Code Book: International Study - 865.

² Designates changes and/or additions to the 865 Code Book. All Card designations over 4 will indicate additions. In such cases the full code will be given since it will be new and not con-
ained in the 865 Code Book.



APPENDIX C

C-6 Special Instructions
for Kansas



Code Book
Wichita, Kansas (009)
 (SPECIAL INSTRUCTIONS)

<u>Card/Col</u> ¹	<u>Ques.</u>	<u>Item Detail</u>	<u>Code</u> ²
		<u>Card 1</u>	
1:4-5		Group Numbers	01 Institute of Logopedics-Dickie, Regular Teachers and 6 Special Ed. 02 Institute of Logopedics-Weir, Special Education 03 Institute of Logopedics-Weir, Special Education Personnel 04 Institute of Logopedics-Weir, Special Education Personnel 05 Institute of Logopedics-Dickie, Special Education and Ancillary 06 Emporia State Teachers College-Dickie, Special Ed. of Public School 07 Institute of Logopedics-Dickie, Special Ed., Speech Pathologists 08 Corbin Education Center, Wichita State Univ.-Dickie, Regular Elementary and Secondary 09 Institute of Logopedics-Weir, Regular Elementary and Secondary

¹ The card/col designations refers to the location in the Code Book: International Study - 865.

² Designates changes and/or additions to the 865 Code Book. All Card designations over 4 will indicate additions. In such cases the full code will be given since it will be new and not contained in the 865 Code Book.

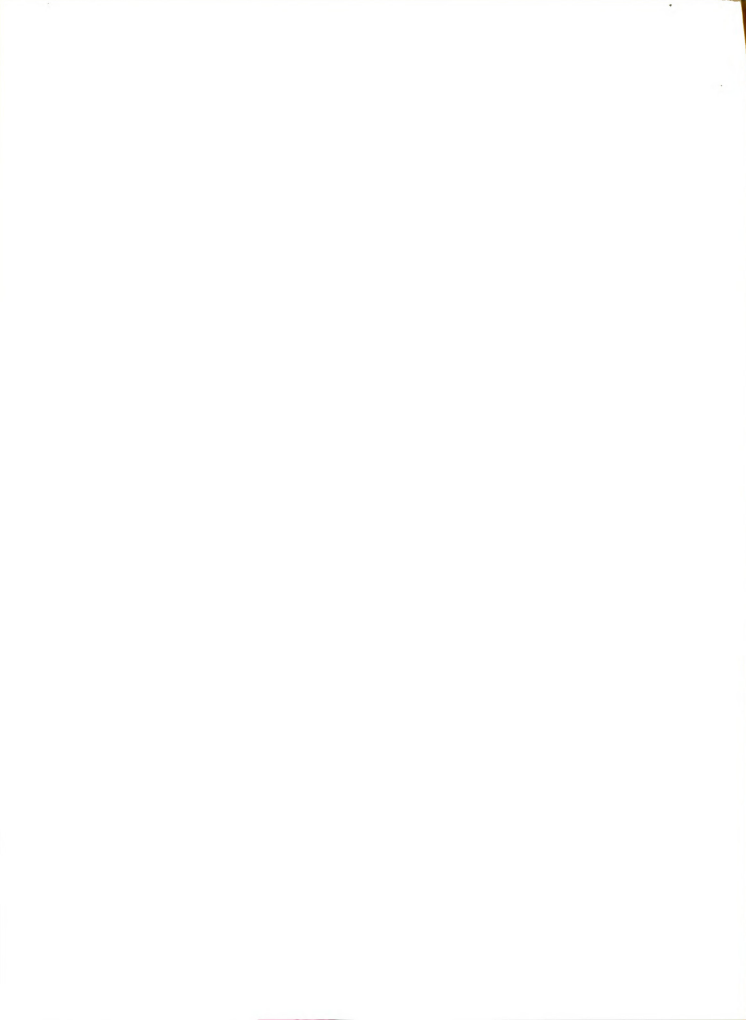


Code Book
Wichita, Kansas (009)
(SPECIAL INSTRUCTIONS)

<u>Card/Col</u> ¹	<u>Ques.</u>	<u>Item Detail</u>	<u>Code</u> ²
1:4-5 (cont.)			10 Town House Motel, Wichita-Dickie, Labor
			11 Ramada Inn, Wichita- Dickie, Labor
			12 YMCA, Wichita-Dickie, Labor
			13 Wichita State Univ.- Weir, Labor
			14 Wichita State Univ.- Weir, Labor
			15 Wichita State Univ.- Weir, Labor
			16 Institute of Logopedics- Weir, Labor
			17 Town House Motel-Dickie, Manager
			18 Ramada Inn, Wichita- Dickie, Manager
			19 YMCA, Wichita-Dickie, Manager
			20 Wichita State Univ.- Weir, Manager
			21 Wichita State Univ.- Weir, Manager
			22 Wichita State Univ.- Weir, Manager
			23 Home-Weir, Manager
			24 Spec. Educ.

¹ The card/col designations refers to the location in the Code Book: International Study - 865.

² Designates changes and/or additions to the 865 Code Book. All Card designations over 4 will indicate additions. In such cases the full code will be given since it will be new and not con-
tained in the 865 Code Book.



Code Book

Wichita, Kansas (009)

(SPECIAL INSTRUCTIONS)

<u>Card/Col</u>	<u>Ques.</u>	<u>Item Detail</u>	<u>Code</u>
<u>Card 5</u>			
5:1-24	1 thru 20 <u>BP Con-</u> <u>tent</u> ^I	All questions in Blind Persons (BP) Scale are to be scored from <u>raw</u> data. See instruc- tions below and on pages <u>1-10</u> .	1-1, strongly disagree 2-2, disagree 3-3, agree 4-4, strongly agree
5:45-64	1 thru 20 <u>BP Inten-</u> <u>sity</u>	BP Scale <u>Inten-</u> <u>sity</u> . See pages 1-11 for instructions for scoring intensity.	1-1, not strongly at all 2-2, not very strongly 3-3, fairly strongly 4-4, very strongly
5:65-66	Sum ² of item scores, 1-20 Content (BP)	BP Scale. Total <u>Content raw</u> score.	00-80
5:67-68	Sum ² of item scores, 1-20 <u>Intensity</u> (BP)	BP Scale. Total <u>Intensity raw</u> score.	00-80

Instructions to Coder: Blind Persons Scale Scoring, Col's 25-44.

1. Reverse the content response numbers for the Blind Persons Scale (not the intensity response numbers) for items 2, 10, 13, 14, 17, 19. See also p. 1-10 for procedures on HP scale. Special instructions for No Response. Same as number 2, p. 1-10.
2. Same as 3, page 1-10, International Code Book-865.
3. Same as 5, page 1-11, International Code Book-865.



Code Book
Wichita, Kansas (009)
(SPECIAL INSTRUCTIONS)

<u>Card/Col</u> ¹	<u>Ques.</u>	<u>Item Detail</u>	<u>Code</u> ²
<u>Card 5</u>			
5:69-70	Sum ³ of adjusted item scores <u>Content</u> (BP)	Adjusted totals based on item dichotomization <u>Content (BP)</u>	00- (Check dich. for no. to use here). See pp. <u>1-11</u> for instructions.
5:71-72	Sum ³ of adjusted item scores <u>Intensity</u> (BP)	Adjusted totals based on item dichotomization <u>Intensity (BP)</u>	00- (Check dich. for no. to use here). See pp. <u>1-11</u> for instructions.

Card 6

6:1-24	Same as other face sheets except Column 11-12 (i.e. Deck or Card no. <u>06</u> .		
6:25-44	1 thru 20 <u>HHP Con-</u> <u>tent</u> ¹	All questions in Hearing Handi- capped Persons Scale (HHP) are to be scored from raw data. See instruc- tions below and on p. <u>1-10</u> .	1-1, strongly disagree 2-2, disagree 3-3, agree 4-4, strongly agree

¹ Reverse the content response number for the Hearing Persons Scale (not the intensity response number) for items 1, 7, 10, 15. See also pages 1-10 of International Code Book-865 for procedures on HP scale. Special instructions for No Response same as number 2 (International Code Book-865) page 1-10.

² Same as 3, page 1-10, International Code Book-865.

³ Same as 5, page 1-11, International Code Book-865.



Code Book
Wichita, Kansas (009)
(SPECIAL INSTRUCTIONS)

<u>Card/Col</u> ¹	<u>Ques.</u>	<u>Item Detail</u>	<u>Code</u> ²
6:45-64	1 thru 20 <u>HHP</u> <u>Intensity</u>	<u>HHP Intensity.</u> See pages 1-11 for instructions for scoring intensity.	1-1, not strongly at all 2-2, not very strongly 3-3, fairly strongly 4-4, very strongly
6:65-66	Sum ² of item scores, 1-20 <u>Con-</u> <u>tent (HHP)</u>	HHP Scale. Total <u>Content</u> <u>raw</u> score.	00-80
6:67-68	Sum ² of item scores, 1-20 <u>Intensity</u> <u>(HHP)</u>	HHP Scale. Total <u>Inten-</u> <u>sity raw</u> score.	00-80
6:69-70	Sum ³ of adjusted item scores. <u>Content</u> <u>(HHP).</u>	Adjusted totals based on item dichotomization <u>Content (HHP)</u>	00- (Check dich. for no. to use here). See p. <u>1-11</u> for instructions.
6:71-72	Sum ³ of adjusted item scores. <u>Intensity</u> <u>(HHP).</u>	Adjusted totals based on item dichotomization <u>Intensity (HHP)</u>	00- (Check dich. for no. to use here). See p. <u>1-11</u> for instructions.

¹ Reverse the content response number for the Hearing Persons Scale (not the intensity response number) for items 1, 7, 10, 15. See also pages 1-10 of International Code Book-865 for procedures on HP scale. Special instructions for No Response same as number 2 (International Code Book-865) page 1-10.

² Same as 3, page 1-10, International Code Book-865.

³ Same as 5, page 1-11, International Code Book-865.



APPENDIX 7

C-7 Data Transcription
Sheet



Attitudes Toward Education: International Study

Handicapped Persons Scale (Card 1)		Education Scale - Traditional		Education Scale - Progressive	
		Card 1	Card 2	Card 1	Card 2
Content (Col)	Intensity (Col)	Content (Col)	Intensity (Col)	Content (Col)	Intensity (Col)
1. _____ (25)	_____ (45)	3. _____ (65)	_____ (25)	1. _____ (35)	_____ (45)
2. _____ (26)	_____ (46)	4. _____ (66)	_____ (26)	2. _____ (36)	_____ (46)
3. _____	_____	6. _____ (67)	_____ (27)	5. _____ (37)	_____ (47)
4. _____	_____	10. _____ (68)	_____ (28)	7. _____ (38)	_____ (48)
5. _____	_____	11. _____ (69)	_____ (29)	8. _____ (39)	_____ (49)
6. _____	_____	12. _____ (70)	_____ (30)	9. _____ (40)	_____ (50)
7. _____	_____	13. _____ (71)	_____ (31)	15. _____ (41)	_____ (51)
8. _____	_____	14. _____ (72)	_____ (32)	16. _____ (42)	_____ (52)
9. _____	_____	18. _____ (73)	_____ (33)	17. _____ (43)	_____ (53)
10. _____ (34)	_____ (54)	19. _____ (74)	_____ (34)	20. _____ (44)	_____ (54)
11. _____	_____				
12. _____	_____				
13. _____	_____				
14. _____	_____				
15. _____ (39)	_____ (59)				
16. _____	_____				
17. _____	_____				
18. _____	_____				
19. _____	_____				
20. _____ (44)	_____ (64)				
_____	_____				

Location _____

Group _____

Respondent No. _____

APPENDIX C

C-8 FCC 1 and 2 Variable-
Computer Print-Out Code
Form for:

Colombia
Peru
Kansas (Friesen)



Colombia (102)

FCC 1 and 2

Variable-Computer Print-Out Code Form

John E. Jordan
College of Education
Michigan State University



Colombia (102)

FCC 1

<u>Field No.</u>	<u>Question</u>	<u>Variable Name</u>	<u>Col.</u>
<u>Card 1</u>			
1	Face Sheet of Scales	Nation	3
2	Face Sheet of Scales	Sex	8
3	37 Q'aire	Interest Group Occupation	9
4	Face Sheet of Scales	Type of Administration	21
5	37 Q'aire	Current Employment Status	24
6-25	H-P Scale	H-P Content	25-44
26-45	H-P Scale	H-P Intensity	45-64
46-55	Education Scale	Trad. Education-Content	65-74

Card 2

1st 24 Cols. SAME as Card 1 except for Col. 11 and 12
(i.e. Deck or Card No.)

56-65	Education Scale	<u>Trad.</u> Education-Intensity	25-34
66-75	Education Scale	<u>Prog.</u> Education-Content	35-44
76-85	Education Scale	<u>Prog.</u> Education-Intensity	45-54

Card 3

1st 24 Cols. SAME as Card 1 except for Col. 11 and 12
(i.e. Deck or Card No.)

86	4 Q'aire	<u>Contact</u> (amount-education)	31
87	5 Q'aire	<u>Contact</u> (gain from education)	32
88	6 Q'aire	<u>Contact</u> (enjoyment-education)	33
89	7 Q'aire	<u>Contact</u> (alternatives to education)	34
90	9 Q'aire	Early Youth Community	37



Colombia (102)

FCC 1 (cont.)

<u>Field</u> <u>No.</u>	<u>Question</u>	<u>Variable Name</u>	<u>Col.</u>
91	10 Q'aire	Employment Community (recent)	38
92	11 Q'aire	Residence Community (recent)	39
93	12 Q'aire	Marital Status	40
94	15 Q'aire	Income (comparative-self fam.)	45
95	18 Q'aire	Income (father's comparative)	52
96	19 Q'aire	Religious affiliation	53
97	20 Q'aire	Religion (importance)	54
98	21 Q'aire	Personalism (job-amount)	55
99	22 Q'aire	Personalism (job-importance of)	56
100	23 Q'aire	Personalism (job-diffusion)	57
101	24 Q'aire	Social class position (self)	58
102	25 Q'aire	Social class position (father)	59
103	26 Q'aire	Education (self-amount)	60
104	27 Q'aire	Education (self-comparative)	61
105	28 Q'aire	Education (father-comparative)	62
106	29 Q'aire	Housing (type of)	63
107	30 Q'aire	Housing (rental-month)	64
108	31-A Q'aire	Institutional satis. (elem. schools)	65
109	31-B Q'aire	Institutional satis. (sec. schools)	66
110	31-C Q'aire	Institutional satis. (universities)	67
111	31-D Q'aire	Institutional satis. (businessmen)	68
112	31-E Q'aire	Institutional satis. (labor)	69
113	31-F Q'aire	Institutional satis. (local gov't)	70
114	31-G Q'aire	Institutional satis. (nat'l. gov't.)	71
115	31-H Q'aire	Institutional satis. (health)	72
116	31-I Q'aire	Institutional satis. (churches)	73
117	32 Q'aire	Residing (current length)	74
118	33 Q'aire	Residing (change-recent)	75

Card 4

1st 24 Cols. SAME as Card 1 except for Col. 11 and 12
(i.e. Deck or Card No.)

119	34 Q'aire	Job (change-recent)	25
120	35 Q'aire	Residing (change-frequency)	26
121	36 Q'aire	Job (change-frequency)	27
122	38 Q'aire	Religiousity (norm-conformity)	30

Colombia (102)

FCC 1 (cont.)

<u>Field</u> <u>No.</u>	<u>Question</u>	<u>Variable Name</u>	<u>Col.</u>
123	39 Q'aire	Change orientation (health-practice)	31
124	40 Q'aire	Change orientation (child rearing)	32
125	41 Q'aire	Change orientation (birth control)	33
126	42 Q'aire	Change orientation (automation)	34
127	43 Q'aire	Change orientation (political leaders)	35
128	44 Q'aire	Education (aid to-local)	36
129	45 Q'aire	Education (aid to-federal)	37
130	46 Q'aire	Education (planning responsibility)	38
131	47 Q'aire	Change orientation (self)	39
132	48 Q'aire	Change orientation (self-rule adherence)	40
133	49 Q'aire	Change orientation (self-routine job)	41
134	50 Q'aire	Personalism (familialism-parental ties)	42
135	51 Q'aire	Personalism (other orientation)	43
136	52 Q'aire	Future Orientation (planning)	44
137	53 Q'aire	Future Orientation (happiness prereq.)	45
138	1-Q-HP	Contact group (primary - HP)	48
139	4-Q-HP	Contact (amount of HP)	53
140	5-Q-HP	Contact (ease of avoidance)	54
141	6-Q-HP	Contact (gain from - HP)	55
142	7-Q-HP	Contact (% income from HP)	56
143	8-Q-HP	Contact (enjoyment - HP)	57
144	9-Q-HP	Contact (alternative to HP)	58
145	10-Q-HP	Contact (amount - M.R.)	59
146	11-Q-HP	Contact (amount-emotional ill)	60



Colombia (102)

FCC 2

<u>Field</u> <u>No.</u>	<u>Question</u>	<u>Variable Name</u>	<u>Col.</u>
----------------------------	-----------------	----------------------	-------------

Card 1

1	Face Sheet	Group Number	4,5
2	37 Q'aire	Specific Occupation	22,23

Card 2

1st Cols. SAME as Card 1 except for Col. 11 and 12
(i.e. Deck or Card No.)

3	Value Scale	<u>Support</u> Value	55,56
4	Value Scale	<u>Conformity</u> Value	57,58
5	Value Scale	<u>Recognition</u> Value (comparative)	59,60
6	Value Scale	<u>Independent</u> Value	61,62
7	Value Scale	<u>Benevolence</u> Value (asset)	63,64
8	Value Scale	<u>Leadership</u> Value (comparative)	65,66

Card 3

1st Cols. SAME as Card 1 except for Col. 11 and 12
(i.e. Deck or Card No.)

9	1 Q'aire	<u>Contact group</u> (primary education)	25,26
10	2 Q'aire	<u>Contact</u> group (secondary education)	27,28
11	3 Q'aire	<u>Contact</u> (varieties of education)	29,30
12	8 Q'aire	Age	35,36
13	13 Q'aire	Number of children	41,42
14	14 Q'aire	Income (yearly-self, family)	43,44
15	16 Q'aire	Brothers (do not use)	46,47
16	17 Q'aire	Sisters (do not use)	48,49
17	None	Siblings	50,51

Card 4

1st Cols. SAME as Card 1 except for Col. 11 and 12
(i.e. Deck or Card No.)

1265

Colombia (102)

FCC 2 (cont.)

<u>Field</u> <u>No.</u>	<u>Question</u>	<u>Variable Name</u>	<u>Col.</u>
18	37 Q'aire	Occupation (specific)	28,29
19	54 Q'aire	Future Orient. (happiness possib.)	46,47
20	2-Q-HP	Contact group (secondary HP)	49,50
31	3-Q-HP	Contact (varieties of HP)	51,52
22	HP Scale	HP Total <u>Content Raw</u> Score	61,62
23	HP Scale	HP Total <u>Intensity Raw</u> Score	63,64
24	Education Scale	Trad. Educ. Total. <u>Cont. Raw</u> Score	65,66
25	Education Scale	Trad. Educ. Total. <u>Int. Raw</u> Score	67,68
26	Education Scale	Prog. Educ. Total <u>Cont. Raw</u> Score	69,70
27	Education Scale	Prog. Educ. Total <u>Int. Raw</u> Score	71,72



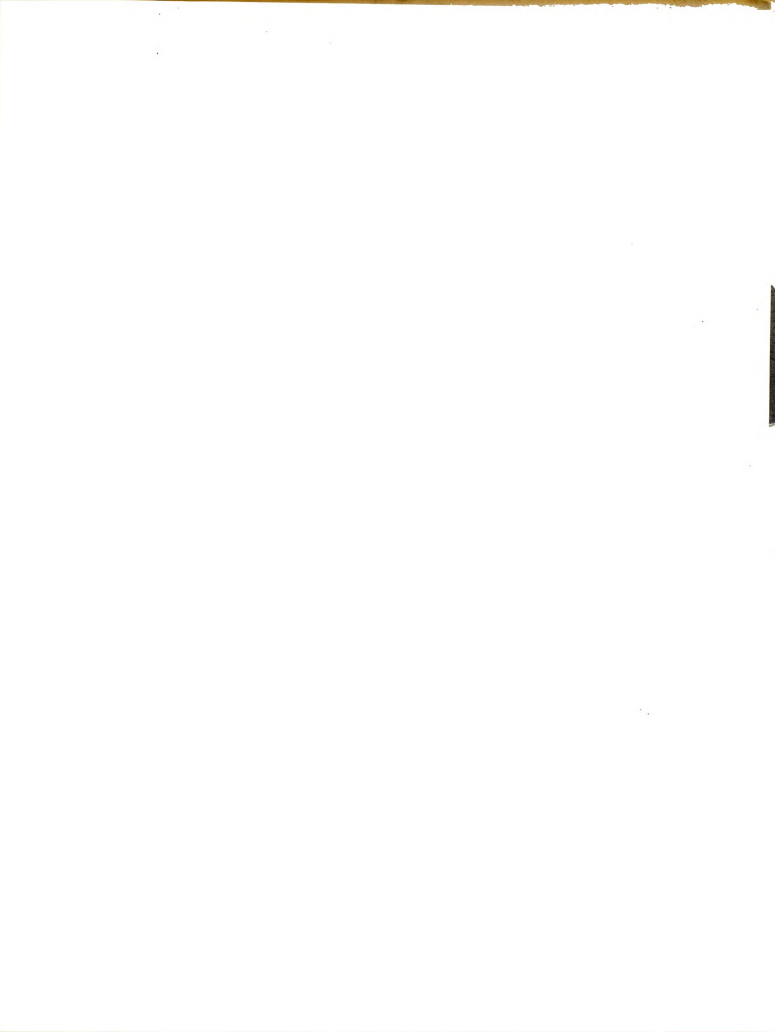
APPENDIX C

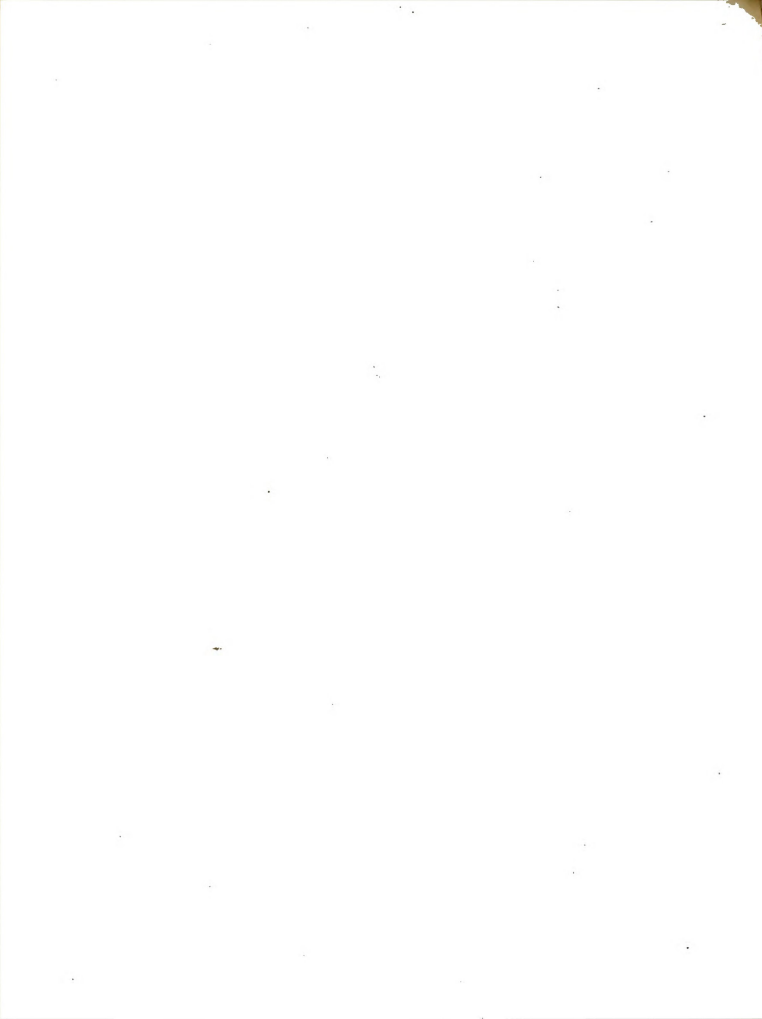
C-9 Religiosity

Religiosity*

Three questions (PQ 18, 19 and 38) were oriented toward religion: (a) religious preference; (b) the felt importance of religion to the respondent; and (c) conformity to the rules and regulations of the church. "Religiosity" also related to the traditional-modern dimension, and higher scores would be expected among the lower income group, and among persons with less education.

* Omitted by error on page 84 of the thesis.





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