A GUTTMAN FACET ANALYSIS OF ATTITUDES TOWARD THE MENTALLY RETARDED IN THE FEDERAL REPUBLIC OF GERMANY: CONTENT, STRUCTURE AND DETERMINANTS

Thesis for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY
LAWRENCE EUGENE HARRELSON

1970

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A GUTTMAN FACET ANALYSIS OF ATTITUDES TOWARD THE MENTALLY RETARDED IN THE FEDERAL REPUBLIC OF GERMANY: CONTENT, STRUCTURE AND DETERMINANTS

presented by

Lawrence Eugene Harrelson

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Counseling, Personnel Services & Educational Psychology

Jack E. Gordon
Major professor

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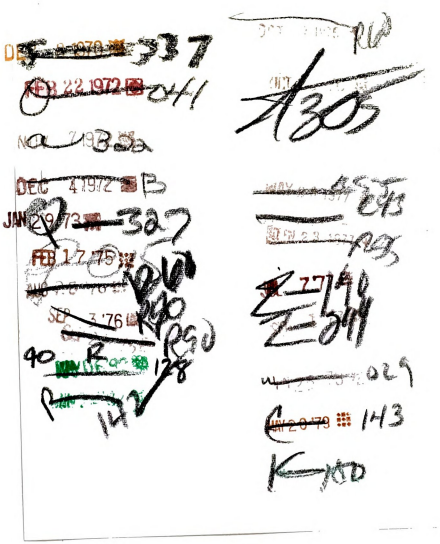

ABSTRACT

A GUTTMAN FACET ANALYSIS OF ATTITUDES TOWARD THE MENTALLY RETARDED IN THE FEDERAL REPUBLIC OF GERMANY: CONTENT, STRUCTURE AND DETERMINANTS

By

Lawrence Eugene Harrelson

Problem

Culturally dependent attitudes in part determine whether the mentally retarded obtain the encouragement and guidance necessary for socially useful and independent lives. This study constituted part of a comprehensive effort to research attitudes toward the retarded in several nations, using similar samples and a common instrument derived from Guttman's facet theory.[1] The purpose was to investigate attitudes toward mental retardation, as well as to assess the predictive validity of certain hypothesized determinants of attitudes, with selected groups in West Germany, included in the international study because of its similarity to the United States in economic and technological development and difference in language, history, and educational provisions for the retarded.

Methodology

The Attitude Behavior Scale-Mental Retardation (ABS-MR) was constructed according to considerations of Guttman's facet theory of attitude structure which specifies that an attitude universe can be sub-structured into attitude levels which are systematically related according to the number of identical conceptual elements they hold in common, i.e., attitude levels close to each other in the semantic scale of their definitions will also be close statistically and the resulting matrix of attitude level inter-correlations will assume a simplex ordering.

Accepting Guttman's definition of attitude as "a delimited totality of behavior with respect to something," Jordan employed a five facet structure, each facet containing a strong and weak element, to construct a scale measuring six levels of attitude interaction with the mentally retarded. Each level contained one more strong element than its predecessor on an abstract-impersonal to concrete-behavioral continuum, and the six ABS-MR levels were called (1) Societal Stereotype, (2) Societal Interactive Norm, (3) Personal Moral Evaluation, (4) Personal Hypothetical Behavior, (5) Personal Feelings, and (6) Actual Personal Behavior. Preliminary work with the ABS-MR in the United States and Belize (British Honduras) suggested reliability on a par with other attitude scales, and its ability

to differentiate groups chosen on the basis of presumed differences in attitudes toward the retarded provided support for concurrent validity. In addition, simplex orderings, predicted by facet theory, were obtained in both nations, providing support for the hypothesis of an invariate structure of attitudes toward the retarded across cultures.

Attitude content and intensity components were combined into one composite criterion score in a German translation of the ABS-MR used to compare the attitudes of West German samples of (a) teachers of the retarded, (b) regular teachers, (c) parents of the retarded, (d) parents of normals, and (e) manager-executives in relationship to four classes of hypothesized determinants and/or predictors of attitudes: (a) contact, (b) knowledge, (c) values, and (d) demographic factors.

Results

Combining content and intensity scores enhanced reliability estimates, and these estimates, as well as the ordering of scale level scores and simplex correlation matrices, were very similar to those obtained in the U.S. and Belize, supporting the cross-cultural utility of facet theory.

The multidimensional nature of ABS-MR attitudes was repeatedly demonstrated. Education, for example, was primarily related to the more abstract-impersonal

levels, while age was most strongly related at the concrete-personal levels. Most surprising, in view of the historical stereotype of the authoritarian German personality, was the tendency of the German subjects to see little relationship between ABS-MR attitudes attributed to others and their own expressed attitudes and behavior. In addition, several independent variables, most notably contact with the retarded, were negatively related to the subject's perceptions of others' attitudes and positively to perceptions of their own attitudes.

ABS-MR multidimensionality was further demonstrated when similar total scores for the special teachers and parents of normals were found to be made up of strikingly dissimilar individual scale level scores.

A number of limitations of the present study and recommendations for further research were listed.

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[1]The international study is being directed by John E. Jordan, College of Education, Michigan State University.

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By

Lawrence Eugene Harrelson

A THESIS

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for the degree of

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Department of Counseling, Personnel Services
and Educational Psychology

College of Education

1970

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PREFACE

This study is one of a series jointly designed by several investigators (Erb, 1969; Gottlieb, 1970; Hamersma, 1969; Maierle, 1969; Morin, 1969; Whitman, 1970) as an example of the "project" approach to graduate research. A common use of instrumentation and theoretical material, as well as technical and analysis procedures, was therefore both necessary and desirable.

The authors collaborated in many aspects although the data and certain design, procedural, and analysis methods were different in each study. The interpretations of data in each study are those of the individual authors.

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ACKNOWLEDGEMENTS

I am indebted primarily to Drs. John E. Jordan and Hartmut Horn for their invaluable assistance. Dr. Jordan served as chairman of my doctoral committee and guided the entire research effort from inception to completion, while Dr. Horn, Professor of Special Education and Educational Psychology at the Ruhr College of Education in Dortmund, was almost wholly responsible for instrument translation, sampling, and data collection in Germany.

I would also like to express my appreciation to the remaining members of my committee, Drs. Harvey F. Clarizio, Gregory A. Miller, and Albert I. Rabin, for their support and suggestions.

I am grateful, too, to Dr. Stewart G. Armitage, Chief of Psychology Service, Battle Creek, Michigan V.A. Hospital, for his patience in allowing me time to complete the research.

Finally, I would like to thank my wife Renate and daughter Kristin for the additional motivation they provided.

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CHAPTER I

INTRODUCTION

It would appear that as yet there is no complete agreement upon the definition of the concept of attitude. There does appear to be general agreement, however, that attitudes are relatively permanent, referential, shared, reflect evaluations, and that social environment is instrumental and decisive in their development (Duijker, 1955).

For the purposes of this research, the general orientation of Kerlinger (1966), and more particularly, that of Guttman (1950) will be accepted and adopted. Kerlinger defines attitude as "a predisposition to think, feel, perceive and behave toward a cognitive object (p. 483)," while Guttman views the same concept as a "delimited totality of behavior with respect to something (p. 51)."

Bastide and van den Berghe (1957) proposed four types or levels of interaction with a cognitive object which Guttman (1959) elaborated into a structural theory of belief and action based on and defined by elements to produce each level. Guttman defined four of these levels or sub-universes: (a) Stereotypes, (b) Norms, (c) Hypothetical Interaction, and (d) Personal Interaction (see Figures 1 & 2 in Chapter III). "Attitude" in this schema

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Jordan (1968) reviewed the literature on attitude studies and concluded that four classes of variables seem to be important determinants, correlates, and/or predictors of attitudes: (a) demographic factors such as age, sex, and income, (b) socio-psychological factors such as one's value orientation, (c) contact factors such as amount, nature, perceived voluntariness, and enjoyment of the contact, and (d) the knowledge factor, i.e., the amount of factual information one has about the attitude object.

Jordan found, however, that most of the research studies were inconclusive or contradictory about the predictor variables and suggested that the reason might very well be that the attitude scales were composed of items seemingly stemming from different structures, i.e., from different levels of Guttman's sub-universes. Lack of control over which attitudinal levels are being measured seems likely to continue to produce inconsistent, contradictory, and non-comparable findings in attitude research.

Numerous researchers (Barker, Wright, Myerson & Gonick, 1953; Berreman, 1954; Force, 1956; Gowman, 1957; Haring, Stern & Cruickshank, 1958; Miller, 1956; Simmons, 1955; Soldwedel & Terril, 1957; Wright, 1960) have demonstrated the significance of attitudes in the acceptance of handicapped persons in certain social and educational

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settings. Gunzburg (1958) states that mental retardation, unlike physical handicap, is to a large extent a social concept, created in part by the Industrial Revolution. Increasing technological complexity as well as the progress of medical and psychological science have undoubtedly led to increased rates of mental retardation, both absolute rates because of expanding population and better diagnosis and treatment, as well as relative rates through identification of those who, while perhaps able to function in a simpler society, are unable to cope with the complex demands of modern society.

Hutt and Gibby (1965) and Gunzburg (1958) have stressed the necessity for concern with the reactions of society to mental retardation. Many of the behavioral reactions of the retardate are learned reactions which are a function of his social environment (cf., Cohen, 1963; Peckham, 1951). Moreover, in the last analysis, the attitudes of society also determine the programs that are provided for adequate care, management, and rehabilitation. Greenbaum and Wang (1965) point out that the vast majority of retardates could be helped to lead socially useful and independent lives if they were able to obtain early the proper encouragement and guidance.

> The likelihood of their doing so depends in great part on the attitudes and conceptions of mental retardation held by the public in general, and in particular by those individuals who have direct contact with the mental retardate at significant times in his life (p. 257).

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Despite the importance of community attitudes, however, very little systematic research has been directed toward uncovering factors which are instrumental in the development of attitudes toward the mentally retarded. In addition, no research has been found that used a facetized design (Guttman, 1959) to measure and analyze attitudes toward retardation or any other category of the handicapped. What importance can be attributed for different attitudinal sub-universes to (a) the amount of contact a person has had with the mentally retarded, (b) the value orientation of the person, (c) the amount of factual knowledge about retardation he possesses, (d) the demographic characteristics of the subject, and (e) the existing social structure within cultural groups?

In a report published by the American Psychological Association, Kelley, Hastorf, Jones, Thibaut, and Usdane (1960) stated there would be "great value" in studying attitudes and beliefs regarding disability through cross-cultural studies of adaptations to disability. Suchman (1964) traces a renewed interest in cross-national research to the increasing international participation of the United States in foreign areas, which has opened many new opportunities for social scientists for study and research.

> Concurrently, the growth of an empirical social science outside the United States has created the need and opportunity for comparing results across national boundaries. Of more basic theoretical

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> and methodological importance is the increased demand, created by the accumulated knowledge in the field itself, for the development of a behavioral science which transcends national or cultural boundaries (p. 124).

Suchman (1964) defines the cross-cultural, cross-national, or intra-cultural comparative method as "an attempt to incorporate time and space as control or limiting variables into generalizations about group behavior (p. 125)." The ultimate goal of this methodology is to provide a logic of analysis whereby the general nature of a phenomenon may be specified and the conditions that give rise to its specific manifestations explained. Hence, the researcher seeks similarities and differences among different cultural, national or social groups in an attempt to discover a "common thread" or level of description which cuts across group lines.

> Given the premise that human behavior is regular and that social systems and social forms occur according to regularities which are also discernible and predictable, it follows that one may (and should) test a generalization developed in one culture by examining the extent to which it holds true in another culture (Suchman, 1964, pp. 126-127).

Suchman (1964) also distinguishes between cross-cultural comparisons as a method of research and as a substantive field of knowledge. As a field of knowledge, comparative or cross-cultural research attempts to build up substantive data about different cultures or groups, and, on this level, the methodological problems lie mainly in the collection of data which are equivalent--data

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describing institutions, practices, attitudes, values, and beliefs, in differing societies. Suchman points out, however, that comparative research is departing more and more from topical or descriptive investigations and dealing increasingly with the cross-cultural testing of hypotheses and is therefore seeking an organizing principle or rationale for the classification of data which is based not on topical categories but upon the elements underlying the concepts being related.

Statement of the Problem

The present study is part of a comprehensive attempt to research attitudes toward the education, rehabilitation, and social acceptance of the mentally retarded in the United States and several other countries which as of this writing include Brazil, British Honduras, Colombia, Iran, Israel, Yugoslavia, and possibly Poland and India.[1] The comprehensive study can be described as being concerned with the following:

1. To determine predominate value orientations and attitudes toward education, rehabilitation, and social acceptance of the mentally retarded among the following interest groups in each of the research countries:

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[1]The larger study on retardation is under the direction of John E. Jordan, College of Education, Michigan State University; assisted by a number of doctoral students. A previous study by Jordan (1968) has already explored cross-cultural attitudes toward the physically disabled.

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(a) Regular School Teachers
(b) Special Education and Rehabilitation Personnel
(c) Parents of the Mentally Retarded
(d) Managers and Executives

2. To assess the predictive validity of the following hypothesized determinants of attitudes toward mental retardation in each of the research countries:

(a) Valuational
(b) Contactual
(c) Demographic
(d) Knowledge

3. To compare each of the analyses (1 and 2 above) among the research countries when ranked according to degree of economic modernization as well as related indices of modernization.

4. To test the hypothesis of an invariate structure of attitudes across nations, i.e., that the Guttman Simplex (Guttman, 1959, 1966) will be maintained across nations (see Chapter III).

It is suggested that the extent of commitment of a society to the full education and integration of its own "outsiders"--the mentally retarded and physically disabled have been likened to Negroes in respect to minority group status (Tenny, 1953)--is an index of the fundamental commitment to democratization and liberalization of education generally, and that such a commitment is not compatible with a focus upon the individual as subservient to the state.

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Attitudes toward retardation in each of the subject nations were measured with a new instrument--the Attitude Behavior Scale-Mental Retardation (Jordan, 1969)--which taps six levels of interaction with the attitude object (see Chapter III and Appendix A).

The purpose of this study was to investigate the predominate value orientations and attitudes toward mental retardation across the six levels of the Attitude Behavior Scale-Mental Retardation (ABS-MR), as well as to assess the predictive validity of the previously described hypothesized determinants of attitudes, with sample groups in the Federal Republic of Germany ("West Germany"). The sample in Germany was selected to be comparable to the samples being used in other countries in the comprehensive study.

The selection of the Federal Republic of Germany provided a population similar to the United States in level of economic development and modernization and yet differing in language, culture, educational system, provisions for the mentally retarded, history of minority group treatment, and commitment to the democratic process. Kirk (1962) has noted, for example, that segregated special schools for the educable mentally retarded are now quite rare in the United States, with the homogeneous special class being the organization most preferred by

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special educators. Such classes, with a minimal chronological and mental age spread, are thought to make instruction more efficient. The advantage of such classes within the framework of the regular school is that the children are able to participate in some school activities with pupils in regular grades. The emphasis in the German Federal Republic, on the other hand, has remained on the segregation of the educable retarded and other disability groups into special auxilliary schools whenever possible (Hylla & Kegel, 1958; International Bureau of Education, 1960; Gathen, 1967).

Inclusion of West Germany in the comprehensive study thus should not only assist in assessing the generalizability of the predictor variables and the utility and fruitfulness of the facet approach to attitude scale construction and analysis, but should, in addition, provide data for cross-national comparisons which will be useful in evaluating research outcomes in the United States as well as being of intrinsic value to the country concerned. The knowledge gained from the construction of the ABS-MR has already proven important and applicable in the construction of scales to measure the attitudes of Negroes and Whites toward each other (Erb, 1969; Hammersma, 1969; Jordan, 1968) and attitudes toward the emotionally disturbed (Maierle, 1969).

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CHAPTER II

REVIEW OF RELATED RESEARCH

Mendelsohn (1954) more than a dozen years ago suggested that a fruitful area of investigation for researchers interested in improving the lot of the retarded would be "to find out first what informational and attitudinal clusters concerning mental deficiency exist among the community's population (p. 507)." A review of the literature appearing since Mendelsohn's suggestion reveals that a number of studies have since emerged in this area; not surprisingly, most have appeared in the American Journal of Mental Deficiency. At the outset it may be stated that these studies vary considerably in sophistication, design, instrumentation, and control; most are not comparable, and few warrant more than passing consideration.

Attitudes Toward Mental Retardation

One of the most comprehensive studies encountered in the literature, and the one most related to the present research, was that conducted by Greenbaum and Wang (1965). These authors administered a 21 scale semantic differential measuring conceptions of four terms describing mental retardation ("idiot," "imbecile," "moron," and "mentally retarded") and three terms describing mental illness

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("mentally ill," "emotionally disturbed," and "neurotic") to over 300 adult respondents who were selected from among the following populations: (a) parents of mentally retarded children (100), (b) professional experts who were likely to advise or treat the mentally retarded (55 vocational counselors, 12 high school teachers of the mentally retarded, 25 school psychologists, and 13 physicians), (c) potential employers of the mentally retarded (68 executives), and (d) paraprofessional employees (37) and volunteers (26) who worked with institutionalized mental retardates.

Nine of the 21 scales measured the three factors of Evaluation (e.g., good-bad, pleasant-unpleasant), Potency (e.g., strong-weak, rugged-delicate), and Activity (e.g., fast-slow, hot-cold) found by Osgood, Suci, and Tannenbaum (1957) through factor analytic work on semantic differential data to most consistently and prominently describe the semantic space in which terms and concepts may be ordered in general. The remaining 12 scales were assembled in an attempt to assess attitudes toward the retardate's social stimulus value, his physical health, and his psychological properties or attributes. The data was analyzed primarily by means of the "sign" test.

The findings indicated that the paraprofessionals had a significantly more positive attitude than any of the other groups, with the parents having significantly more

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positive attitudes than both the professionals and the employers--the latter had the most negative attitudes of the groups measured while the professionals had a significantly more positive score than the employers on the Evaluative factor only.

It was found that the general structure of conceptions of the mentally retarded was the same for all groups, i.e., the scores covaried. This conception, however, was mainly a negative one. Only three of the scales averaged in a direction just barely positive while seven were strongly negatively evaluated. Parents and professionals were clearly ambivalent on the Evaluative factor. In addition, it was found that all groups had a more negative attitude and conception of the mentally retarded than of the mentally ill.

Analysis of the data by demographic variables yielded the following results: (a) the less well educated and those of lower socioeconomic standing were more favorably disposed toward the mentally retarded; (b) female subjects tended to have more positive conceptions of mental retardates than males; this latter finding, however, may have been confounded by the sexual composition of the various groups; (c) there was a non-significant trend for older subjects to hold more positive images of the retarded than younger subjects.

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Greenbaum and Wang (1965) offer some explanations for their findings and their study was, in general, well conceived and executed. A question might be raised as to whether some differences may have been lost as a result of treating the data for counselors, special education teachers, and physicians under one concept, i.e., "professional experts." The authors offer a rationale for treating the four terms referring to mental retardation under one concept but it is wondered how various groups reacted to various labels--the authors do state that reactions to the terms "mentally retarded" and "moron" were generally more favorable than the reactions to the terms "idiot" and "imbecile." The attitudes being measured in this study, however, would appear to fall at the comparative, Stereotypic level in Guttman's (1959) paradigm and the other levels of Guttman's attitude universe (see Figures 1-4 in Chapter III) were not being assessed.

None of the other studies encountered attempted to comprehensively compare as many different groups as did Greenbaum and Wang (1965). The remaining studies to be reviewed do not readily lend themselves to systematic organization by topics and it was somewhat arbitrarily decided to order them according to the subjects or sample groups being studied.

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Self Attitudes

A few studies have appeared which were concerned with self attitudes among the retarded. For example, in attempting to develop a system of personality assessment based on the institutionalized female retardate's conception of herself and her world, Guthrie, Butler, and Gorlow (1961) found a high positive correlation between how the retardate saw herself and how she believed others perceived her.

In a 1964 study, Guthrie, Butler, Gorlow and White, again using institutionalized female retardates, found that self attitudes were often defensive and designed more to protect the self from painful rejection than to gain approval through achievement. Kniss, Butler, Gorlow, and Guthrie (1962), with a similar sample, found no relationship between ideal self attitudes, as determined by a Q-sort, and age, IQ, and length of institutionalization. Similarly, McAfee and Cleland (1955) found no difference between the self-ideal self discrepancy between adjusted and maladjusted educable males.

McCoy (1963) found that a sample of educable mentally retarded underachievers, when compared to a matched sample of retarded achievers, had a significantly lower degree of realistic self confidence as well as a lower and less realistic level of aspiration. There was also a non-significant trend for achievers to have a higher degree

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Snyder (1966), in a well designed study, correlated academic achievement with measures of personality, self attitudes, and anxiety in a sample of mildly retarded children obtained from a variety of settings and found significant differences in the expected direction between high and low achievers on all three measures. Snyder also noted that even the high achievers generally showed poorer adjustment than normal IQ children.

Meyerowitz (1962) compared groups of educable first grade retardates who had been randomly assigned to regular and special classes to a normal criterion group on an index of self derogation especially developed for his research. Meyerowitz found that the retardates as a group were more derogatory of themselves than the normal children. Contrary to expectation, he also found that the retardates assigned to regular classes were less derogatory of themselves than those assigned to special classes--perhaps because their age had not yet permitted significant failure experiences thought to result from regular class placement.

Laing and Chazan (1966) used a sociometric technique to study group structure in a sample of classrooms for the retarded in South Wales. The authors concluded that their results did not agree with the results of an earlier study by Moreno (1934) who found that the organization of groups

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Miller (1956) had earlier used the sociometric procedure to compare social status and socioempathic abilities (awareness of one's own and others' status) among mentally retarded, normal, and superior upper elementary children in regular classrooms. It was found that the retardates proportioned their choices across groups equally while the superior and normal children generally favored the superior children most and the retardates least. Socioempathic ability followed the expected pattern with the superior children showing more ability than normals who in turn showed more ability than the retardates.

Peer and Community Attitudes

Smith and Hurst (1961) found a significant relationship between motor ability and peer acceptance in a group of trainable and educable retardates attending a day school. Clark (1964a) reports a similar finding using a large sample of normal fifth grade boys and girls and their attitudes toward a "special" group of educable mentally retarded in the same school. Employing an interview and content analysis technique, Clark found a fluid boundary between the retarded-normal groups and, while the retarded were at times evaluated unfavorably, the normals reacted

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Clark (1964b) in a separate study found that normal children in classes adjacent to a class for mentally retarded did not identify photographs of retardates with their special class status in an elementary school. An attempt was then made to more directly ascertain perceptions of the special class and it was found that only 10.9% of the children's remarks about the class were derogatory. Over 90% of the children described special class members in terms of deviancy but only 5.4% correctly described this deviancy as mental retardation. These results are in seeming contradiction to those of Johnson and Ferreira (1958) who reported that interviews with retardates in special classes revealed that 70% had been called derogatory names because of their special class status.

Jaffe (1966) demonstrated the importance of stereotypes which become attached to the concept of mental retardation. In a well designed study, Jaffe employed two semantic differential scales, (a) one tapping the Evaluative factor and the second, (b) measuring a combination of Activity, Potency, and an Independent-Suggestible factor. In addition, (c) an adjective check list, (d) the Social Distance Scale, (e) a vocabulary test, and (f) demographic data (including amount of contact with the retarded) were

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also used to investigate attitude relationships among 240 high school seniors. Half the group responded to a retarded sketch person and half responded to a non-retarded sketch person as well as to the label "mentally retarded." No significant differences were found on instruments a, c, and d between the retarded and non-retarded sketch persons; however, the retarded sketch person was significantly more favorably evaluated than the label "mentally retarded" on the Evaluative factor. Instrument b showed a significant difference between the retarded and non-retarded sketches while only instrument c showed a difference between those who had and those who had not had contact with retardates. Jaffe interpreted this finding as suggesting that contact may be related to a more cognitive or descriptive dimension of attitudes as opposed to actual feelings.

Indices of the students' intelligence and socio-economic status were not related to any of the attitude measures but it was found that girls attributed a greater number of favorable attitudes to the retarded sketch person than did boys. Jaffe's study represents one of the better efforts to relate demographic indices and the contact factor to attitudinal measures and to move beyond the stereotypic level.

Jaffe (1967) later used a similar design to assess attitudes of high school seniors toward an identical sketch

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person identified as mentally retarded to one group and as "an amputee" and "emotionally disturbed" to two others. Another group of students responded to the labels "amputee," "mentally retarded," and "former mental patient" as well as to the sketch person not identified as disabled. The instrument used was the semantic differential and in each case the disabled sketch person was more favorably evaluated than the corresponding label. Of the three terms, "mentally retarded" was the least favorably evaluated.

Badt (1957) reported results of a study in which the attitudes of university students in education and other curricula were obtained toward exceptional children as a group as well as toward separate categories of exceptional children. Analysis was descriptive only but, generally, the attitudes of the students seemed to be most unfavorable to mentally retarded and emotionally disturbed children.

In a study purporting to deal with attitudes but actually concerned primarily with possession of factual information, Mahoney and Pangrac (1960) found a difference between freshmen and senior college students on a 12 item true-false test. For the latter group there were significant correlations between test scores and number of relevant courses (dealing with mental deficiency) completed and grade point average.

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In a similar design, Winthrop and Taylor (1957) found significant differences between men and women on two items of a nine item dichotomous response (yes-no) test and concluded that a great deal of misinformation existed among the adult laymen in their sample.

Polansky (1961) used the same scale (Mental Deficiency Misconception Scale) and related responses of psychiatric technicians in a state hospital for the retarded to several psychological variables. His hypothesis that psychiatric technicians held incorrect opinions concerning mental deficiency in a proportion similar to laymen in the Winthrop and Taylor (1957) study was not supported, e.g., technicians believed to a greater extent than laymen that "the feebleminded are readily recognizable." It was also found that female technicians had fewer misconceptions than males and appeared to be more "tender hearted." Polansky also found some support for his hypothesis that responses to the MDMS are affected not as much by exposure to education or by factual knowledge but rather by beliefs, attitudes, and emotional biases.

Anders and Dayan (1967) also studied attendants in an institution for the mentally retarded. Their purpose was to relate ethnic variables to child-rearing beliefs and attitudes measured by a 45 item questionnaire. Only the religious factor proved significant, with Catholics

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Meyers, Sitkei, and Watts (1966) used a five question interview to assess attitudes among two community groups toward the educable and trainable mentally retarded and their education. The groups were (a) a random sample of a city of 80,000 near Los Angeles (N=188), and (b) 24 households where a child was enrolled in a special class for the mentally retarded. The study was summarized as follows:

> (1) Special class families are more willing to keep EMR and TMR children at home rather than send them away. Non-caucasians in the special sample families are especially accepting. (2) The special sample families tend to be more supportive of public school provision for either the EMR or TMR. (3) Respondents in a religious group generally calling for orthodoxy of belief were less accepting than those whose identification with religion was of a liberal or casual sort. (4) The more mobile families with retarded children favor keeping the child at home rather than in an institution. (5) In general, there is less acceptance of public school responsibility for the trainable than for the educable retarded child. (6) Distressing percentages of respondents in both samples appear to misunderstand the potential of the EMR child, many believing they should be institutionalized, should not go to school, should not have provisions, etc. That result, together with the results generally, bespeak a still considerable public misunderstanding of the potentialities of the educable, and of the possibilities for decent community living for the trainable (p. 83).

Heater (1967) used an attitude scale which measured intensity as well as positiveness to assess attitudes toward the mentally retarded of 405 clergymen of various

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denominations (Jewish, Roman Catholic, Methodist, Christian Reformed, Reformed Church of America and the Missouri and Wisconsin Synods of the Lutheran Church) and to relate these to a number of variables obtained through other instruments. It was found that clergymen with more frequent contact with mentally retarded persons tended to feel more strongly about their attitudes toward the mentally retarded regardless of whether the attitudes were favorable or unfavorable--a finding at variance with the previously noted suggestion of Jaffe (1966) that contact seems to be related to a more cognitive as opposed to emotional dimension of attitude.

Clergymen in Heater's study who placed more value on doing things for other people and being generous tended to show more favorable attitudes toward the mentally retarded. Sources of the variance of attitudes were found to be primarily within denominational groups for there was no evidence of differences between any of the groups and the rural-urban areas studied in respect to attitudes. It was found, however, that high scores on a measure of conformity tended to be made by clergymen who held unfavorable attitudes toward the mentally retarded. Heater's study represents one of the few in this area that attempts to relate general value orientation to attitudes toward the mentally retarded.

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Teacher Attitudes

Four studies were found which at first glance appeared pertinent to the heading of this section. On further investigation, however, two of these (Harris, 1956; Harris, 1958) were exploratory single case studies of limited value, while a third (Conner & Goldberg, 1960) consisted of a superficial analysis of a survey with less than a 50% response rate.

Semmel (1959) in what is possibly the only substantive study available in this area, explored the relationship between the attitudes of 40 regular and 27 special education teachers and the knowledge variable. Semmel employed a 48 item questionnaire, 32 of which were factual and 16 of which measured attitudes toward retardation. Analysis of mean scores revealed that the special teachers had significantly greater knowledge concerning mental deficiency than did regular grade teachers; however, both groups showed an equally high positive attitude score. Semmel concluded that his research "questions the implied relationship between correct information and positive attitudes toward the retarded (p. 573)." These findings may have been confounded, however, by the fact that proportionally more women and three times as many teachers with 10 or more years experience existed among his regular teacher group than in the special educator group. It is also not clear what facets or levels of

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of attitudes were being measured. Nevertheless, Semmel's research represents the lone exploratory attempt found in this area and points the way for further efforts.

Parental Attitudes

Several studies have appeared which have attempted to elicit parental attitudes through the use of interviews. Rosen (1955), for example, employed a 56 item interview schedule and content analysis to relate maternal responses to an hypothesized five phase developmental sequence of understanding and acceptance of retardation. Rosen found that, in general, the mothers' reactions conformed to the five phases: (a) awareness of the problem, (b) recognition of the problem, (c) seeking for a cause, (d) seeking for a solution, and (e) acceptance of the problem.

Gordon and Ullman (1956) reported their impressions following eight weekly group therapy sessions with parents of mongoloid children. They found a great deal of uncertainty among the parents despite a history of medical advice and felt that the parents overestimated the importance of their children's IQ scores to the neglect of other factors that determine social adjustment. These authors described the parents as being saddled with guilt and defensiveness and noted that overprotection and inability to make realistic demands on the child were the "most commonly expressed neurotic attitudes."

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Schonell and Watts (1956) interviewed 50 parents of retarded children in Brisbane, Australia. Most of the subjects were mothers and reported favorable attitudes on the part of the father, siblings, relatives, and outsiders. In eight cases, however, the attitude of the father was unfavorable, in seven cases sibling attitudes were unfavorable, and in nine cases those of relatives were unfavorable. Five parents complained of unfavorable attitudes and treatment of the child by people outside the family circle. Schonell and Rorke (1960) also report some positive changes in attitudes toward retardation in the same sample after the children had been established in a day school for special training.

Stoddard (1963), in perhaps the most controlled study using the interview technique to assess parental attitudes, randomly sampled and interviewed parents of retarded children and correlated elicited attitudes with several objective measures of the child's intelligence and achievement. Stoddard found no demonstrable relationship between parental attitudes and the achievement of their severely retarded children but qualified her conclusion by stating that the lack of relationship was likely a function of inadequate instruments.

Ehlers (1964), in an exploratory study using a focused interview format and descriptive analysis, attempted to relate a number of variables to parental

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attitudes toward services offered their retarded children by a community agency. Only the social class factor seemed important, i.e., lower class parents were more willing to avail themselves of community services than were middle class parents, which may or may not be a reflection of more positive attitudes as opposed to accessibility to private resources.

Levine (1966) had interviewers rate parental responses regarding their male and female retarded children on a social competency scale and found significantly more agreement among the parents of a child when the child was female. The children were all trainable retardates and the differences were attributed to the fathers' tendency to devalue the male retardate more than the female retardate.

Mercer (1966) used information from hospital records as well as interviews to indirectly relate attitudes toward institutionalization in families of 76 retardates released from and 76 matched retardates still hospitalized in an institution. She found that the retardates who were re-accepted by their families (released) were more frequently diagnosed as familial or undifferentiated and showed a non-significant tendency to have fewer physical handicaps. While the patterns of pre-institutional crises were similar for the two groups, it was the additional physical care problem which differentiated the groups.

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Meyerowitz (1967) interviewed parents of 180 educable young retardates who had been randomly assigned to regular and special classes upon entering school. It was found that the parents of children placed in special classes manifested greater awareness of retardation even though 55% of this group were judged unaware of their child's retardation and more than 25% of these parents whose children had special class training for two years persisted in responding that the child was better than other children in academic skills! Parents in this group also showed a consistent but statistically less than significant tendency to derogate and devalue their children more than parents whose children were placed in regular classes.

Olshansky and Schonfield (1965) interviewed 105 families (primarily parents) of graduates of special classes for the mentally retarded and found that one-third said they thought the graduate was normal while the remainder refused to classify him either way. The authors suggest that this did not involve a denial of reality since those who were rated normal could be better classified as "culturally deprived." The ex-students perceived as normal or who were not rated were judged to be significantly better adjusted at home, socially and vocationally, and differed on several demographic variables from those judged mentally retarded.

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Caldwell and Guze (1960) employed psychiatric interviews in addition to an impressive battery of instruments, including three attitude scales, to investigate adjustment and attitudes of mothers and siblings of retardates who were institutionalized as compared to retardates living at home. Despite the relatively large number of dependent variables (eight in all), no significant differences were found between the two groups.

Thurston (1959) reported on the development of a new sentence completion instrument to assess parental attitudes toward their handicapped children and later (Thurston, 1960) described results of a study involving the attitudes and emotional reactions of parents of institutionalized cerebral palsied, retarded patients. Thurston's sample was large (213) but constituted only a one-third return of his original target population. He categorized the responses into eight categories and concluded that as a group the parents appeared hostile, suspicious, and generally uneasy and went through a long "period of mourning."

Condell (1966) used a modified version of Thurston's Sentence Completion Form to investigate the attitudes of parents of mental retardates in rural Minnesota toward mental retardation and toward an agency and its staff dealing with mentally retarded children. Less than 50% of the parents contacted completed the form and the author

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concluded that parental attitudes were not uniform. While professional help was sought, there was a question of its acceptance.

Kenney (1967), in a well designed study, employed measures of authoritarianism and ego development (defined on a concrete-abstract thinking basis) with four groups of 10 mothers who were matched on a total of 11 variables: (a) mothers who had a retarded, adjusted child, (b) mothers who had a retarded, maladjusted child, (c) mothers with a normal IQ, adjusted child, and (d) mothers with a normal IQ, maladjusted child. It was found that mothers of adjusted children, regardless of IQ, were less authoritarian in child-rearing attitudes than mothers of maladjusted children. The hypothesis that mothers of retardates would be more authoritarian than mothers of normals was not supported. Level of the mothers' ego development was related to adjustment of the child with the retarded group only.

Barclay and Vaught (1964) used a rating scale with a group of mothers of non-institutionalized cerebral palsied children and found that the mothers of cerebral palsied children whose intellectual potential would classify them as mentally retarded typically overestimated their children's potential for future development.

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child. Zuk divided 76 parents of mentally retarded children, on the basis of evaluation of case histories, into 30 accepting and 40 non-accepting parents and compared them via Chi Square according to religious preference. Zuk found a significant relationship between the mother's religious background and her acceptance of the child. Catholics were far more accepting than non-Catholics. Of 39 Catholics, 25 were accepting, 14 were not; of 28 Protestants, 5 were accepting, 23 were not; and of 9 Jews, none were classified as accepting. It was also found that the age of the child was an important factor in acceptance--generally, the younger the child the more likely he was to be accepted.

Peck and Stephens (1960) used a variety of observational and rating techniques on a sample of 10 retarded children and their parents in an attempt to assess the effect of parental attitudes upon their children. Their findings indicate the importance of the father's attitude in the home: a .83 correlation was found between the father's acceptance or rejection of his mentally defective child and the amount of acceptance or rejection observed in the home situation. Correlation involving mothers was only .09 and not statistically significant.

Dingman, Eyman, and Windle (1963) gave the Parental Attitude Research Instrument (PARI) to eight groups to compare attitudes on child-rearing practices: (a)

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60 mothers of normal children, (b) 48 mothers of severely retarded children, (c) 48 mothers of mildly retarded children, (d) 45 foster mothers who cared for selected retardates, (e) 11 supervising social workers, (f) 148 psychological technicians in a state hospital, (g) 38 clerical and other employees in the same hospital, and (h) social worker responses predicted for foster mothers. Analysis revealed a lack of clear differentiation between mothers of the severely retarded and the mildly retarded, with the exception that the latter were generally more protective, a finding that also characterized the foster mothers. These latter two groups generally had less education and were also of lower social status. Social workers stood out as being the most permissive while hospital employees gave responses similar to the social workers regardless of their position. The usefulness of the PARI, however, has been questioned by Doll and Darley (1960) in the area of speech and hearing disorders and contradictory findings using this instrument have been noted in the field of psychopathology, i.e., Horowitz and Lovell (1960) and Zuckerman, Oltena and Monashkin (1958).

Finally, in the last study to be cited in this area, Worchel and Worchel (1961) had a group of middle class parents of retarded children rate these children on 38 traits of adjustment and values. Ratings were also obtained from this group for their own normal children,

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other children, and their conception of an ideal child. It was found that the retarded child was rated significantly less favorably on personality traits than the normal child. The distribution of the ratings on the retarded children was almost bimodal, indicating the tendency of parents to rate them on either extreme of the scale, whereas that for the normal children yielded the typical bell shaped curve. Parental ratings of their retarded children, interestingly, did not differ significantly from their ratings of children other than their own normal children. It was also found, in line with the above, that the mean discrepancy between the ratings on the retarded and ideal child was significantly higher than the mean discrepancy between the normal and ideal child.

Employer Attitudes

Only three systematic studies were found in the recent literature which were concerned with the attitudes of employers toward the mentally retarded although several writers (DiMichael, 1953; Blatt, 1961; Allan, 1962; Salkind, 1962) have expressed the opinion that the major deterrent to successful employment of the retarded is the generally negative attitude of employers.

Cohen (1963) related the scores of 177 employers (in the immediate area of a training and research center on retardation) on a scale designed to measure attitudes

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toward hiring the retarded to the amount of education of the employer, the amount of contact with retardates, and a check list measuring knowledge about retardation. Cohen found, somewhat surprisingly, a significant negative relationship between attitudes and reported educational level. This was in spite of a significant positive relationship found between educational level and a realistic conception of retardation. The contact variable was not significant and Cohen concluded that employer attitudes in his study were relatively independent of knowledge.

Hartlage (1965) reports findings which question those of Cohen (1963) just cited. Hartlage found no relationship between the educational level of 120 employers (out of 283 contacted) and their receptivity toward hiring the retarded. Hartlage did find, however, that the size and type of business or industry was significant; with large manufacturing industries being the most receptive and service industries the least. Hartlage's findings were based on a 15 item questionnaire.

Phelps (1965) cited the results of a study which completely contradict Cohen's (1963) findings while substantially agreeing with those of Hartlage (1965). Phelps employed a 54 item weighted questionnaire containing both factual and opinion statements and compared the responses of 132 service employers (of 257 contacted). Phelps, in contrast to Cohen, found a positive relationship between

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educational level of personnel managers and attitude responses toward the mentally retarded. As did Hartlage, Phelps also found a positive relationship between the size of the organization and attitudes. A positive relationship was also found between attitudes and length of time of employment. Differences were found too between types of service industries, with hospital and motel personnel managers being more favorable to hiring retardates than hotel, laundry-dry cleaner, restaurant, and nursing home personnel managers.

Attitude Change

Only a few studies have apparently appeared in the literature which purport to be concerned with changes in attitude toward mental retardation. Four of these studies (Cleland & Chambers, 1959; Cleland & Cochrane, 1961; Kimbrell & Luckey, 1964; Sellin & Mulchahay, 1966) have employed the same basic methodology, i.e., testing of various groups (mainly high school and college students) before and after tours of institutions for the mentally retarded. In general, the results of these studies have been contradictory and inconclusive. For example, the control group in one study (Cleland & Cochrane, 1961) showed the most "attitudinal shift" even though this group was not subjected to the independent variable. It may be said, in brief, that (a) attitudes and information

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seem to be confused in these studies, and (b) the changes were in a positive direction in some cases and in a negative direction in others.

Appel, Williams, and Fishell (1964) attempted to assess attitude changes in 21 mothers of retarded children two years after group counseling. Scores on a sentence completion form were compared at that time with pre-counseling scores. The parents became concerned less with their own feelings and more with the needs of their retarded children; however, they found it just as difficult to accept the disability as before. A control group might have helped to determine whether the reported changes were really effected as a result of counseling, as the authors contend, or were merely a function of the passage of time.

Bitter (1963) in a similar but somewhat better controlled study administered a four instrument battery to 16 parents before and after a parent education program involving group discussions and consisting of seven monthly sessions. Attitudes toward child-rearing and mental retardation in general as well as measures of the characteristics of their own trainable children and knowledge regarding mental retardation were obtained. Parents as a group demonstrated significant changes in a positive direction in democratic attitudes toward child-rearing on one of the scales; however, these parents also made significantly more errors on the knowledge test after the

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Conclusion

It is of interest to note that none of the studies reviewed have employed an attitude scale constructed on the basis of the structural facet theory proposed by Guttman (1959). Thus it is entirely unclear just what attitudinal levels or sub-universes in the Guttman model were being measured in most, if not all, of these studies, although the impression here is that most of the scales used would likely fall at the more abstract and stereotypic levels in Guttman's paradigm (see Figures 1-4 in Chapter III). It is also likely that at least some of them were measuring mixtures of Guttman's facets, some were measuring facets not included by Guttman in his model, while some were not measuring attitudes at all but fall more in the realm of achievement tests since factual knowledge only was being assessed. Lack of control over facets being measured as well as loose definitions of attitudes will likely continue to contribute to results

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which are not comparable, inconsistent, and at times contradictory. Much the same can be said, of course, with regard to lack of control over subject variables but this problem appears to be more easily correctible, providing that instrumentation is adequate and comparable.

It is also of note that not one study was encountered which attempted to relate findings cross-culturally or cross-nationally. In fact, only three studies (Laing & Chazan, 1966; Schonnel & Watts, 1956; Schonnel & Rorke, 1960) were found in the American literature which were conducted in countries other than the United States.

Although no clear consensus existed in the review of the literature, it does indicate that numerous variables seem to be related to attitudes toward mental retardation, i.e., sex, education, social class, religion, occupation, amount of knowledge, general value orientation, and contact. Few of the studies, however, attempted to systematically control more than one or two of these variables or to relate verbal attitudes to actual behavior. It seems clear that research is needed which attempts to systematically control these variables across various groups and cultures if fruitful and generalizable findings are to ensue.

Methodological Considerations In Cross-Cultural Research

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Relevancy: Mental Retardation in West Germany

It is quite obvious that if meaningful and comparable results are to be obtained in cross-cultural or cross-national attitudinal research the focus must be on those potential attitude referents or objects whose existence is acknowledged in all the cultures to be compared (Duijker, 1955).

While the German language does not provide an identical translation of the concept "mental retardation," the concept is nevertheless extremely relevant in that highly developed country.[1] In the place of a broad, general term like "mental retardation," the German language provides descriptive terms which discriminate between various levels of mental retardation. The two

[1]The general source of material in this section, where otherwise not documented, stems from notes gleaned from interviews with Dr. Hartmut Horn, Associate Professor of Special Education and Educational Psychology in the Paedagogische Hochschule Ruhr--Abteilung fuer Heilpaedagogik in Dortmund (Ruhr College of Education--Department of Special Education in Dortmund).

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(non-institutionalized) levels of retardation or types of retardate with whom most of the population of the Federal Republic of Germany are likely to be familiar are the Lernbehinderte and the Geistigbehinderte.

The Lernbehinderte ("educationally handicapped") roughly correspond to the American classification criteria for the educable or mildly retarded and their IQ's fall in the general range of 60-80. The Geistigbehinderte, on the other hand, roughly correspond to the moderately retarded in this country, with IQ's in the 40-60 range. The Lernbehinderte constitute approximately five percent of the total school population in West Germany while the Geistigbehinderte, although making up approximately .06% of all children born in the Federal Republic (Mutters, 1967) are not represented to this extent in the school population because education for these youngsters is a relatively recent innovation in Germany.

In order to better understand educational provisions for the retarded in Germany, a few brief comments are in order regarding the organization of public schools in that country. The basic educational institution in Germany is the Volkschule which generally has eight or nine grade levels and is attended by children ranging in age from six to fourteen. The first four grades in the Volkschule are attended by all children and are basic to admission to the Mittelschule or intermediate school

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to which approximately 25% of German children gravitate. The intermediate school, in turn, is basic to subsequent higher education in a Hochschule or university. Approximately 75-80% of German children, however, continue in the Volkschule and terminate their formal education at age 14, whereupon they enter either an apprenticeship, a vocational or commercial school, or, failing that, become unskilled or semi-skilled workers (Hylla & Kegel, 1958).

As was noted in the introductory chapter, Germany has traditionally maintained a separate educational system for the educable mentally retarded, as well as for other handicapped children, which takes the form of special schools for each disability group whenever possible. Thus, there are Sonderschulen or special schools for the retarded, the physically handicapped, the speech defective, and so forth (Hylla & Kegel, 1958).

If a child fails one of the first four grades in the Volkschule twice, he is given an IQ test and a battery of achievement tests. If the tests confirm that the child is indeed retarded but educable he is then sent to a special school for Lernbehinderte. Most of these children come from the lowest socioeconomic class and many of them are considered culturally deprived.

It is a commonly accepted maxim that the goals of the special schools for the mildly retarded are the same as those of the Volkschule. Gathen (1967), for example,

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states emphatically that "the educational and training goals of the special schools can only be (and no other goal is permitted) the same as for the regular school (p. 68)." In reality, however, these academic goals are rarely attained and the Lernbehinderte generally achieve at a rate approximately two years behind that of children from the Volkschule at the time of graduation at age 14.

After leaving the special school, approximately one-third of the educable retarded are able to complete apprenticeships in some of the less demanding skilled trades (e.g., painting, stone masonry, etc.) while the remaining two-thirds generally are able to obtain unskilled or semiskilled employment in Germany's booming economy.

While educational facilities have traditionally been provided for the mildly retarded, education or training for the Geistigbehinderte or moderately retarded has not even been considered until very recent times. Mutters (1967) traces this development to the effective lobbying of a parents' organization ("Lebenshilfe fuer das geistig behinderte Kind") and passage of federal social legislation in 1961 which for the first time established the legal claim of these children to a suitable education. Since 1961, over 150 educational institutions have sprung up for the moderately retarded in West Germany, but as late as 1964 these special

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schools were serving only about 15% of those in the eligible age range of 7-18. Mutters (1967) notes that it will actually take several more years before most of these children have any sort of educational opportunity at all, especially in the rural areas where the problem is compounded by transportation difficulties.

The emphasis in these special schools is generally social and vocational as opposed to the academic emphasis in special schools for the mildly retarded. Many of the moderately retarded do not enter school until the age of 12 because of both lack of readiness and the existence of waiting lists, but they are generally permitted to remain in school until age 20. Approximately 20% of those youths completing their special education find employment in a competitive situation while nearly all the rest find employment in sheltered workshops, thanks in no small part again to Germany's favorable economic situation and chronic labor shortage.

It is interesting to note, and common knowledge in Germany although documentation is almost impossible, that it was official Nazi policy to eliminate the moderately retarded population in Germany and that over 50% of this population was actually executed before grumblings from German soldiers over rumors that disabled soldiers were also to be killed put an end to this program in the early 1940's. The futility, if not the

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inhumanity, of this policy is attested to by the fact that unlike the majority of mildly retarded, the moderately and severely retarded emanate from all social and economic class levels (Hutt & Gibby, 1965). The mildly retarded, however, were not affected by this pogrom because of their usefulness in the labor force of the Third Reich.

Measurement: Dimensions of Attitudes

In comparative research the first thing it is necessary to know, of course, is what to compare. Attitudes are usually identified by their objects or referents--thus, one speaks of attitudes toward the retarded, toward war, toward marriage, and so forth. Duijker (1955) points out that attitudes toward the same referent, within the framework of one culture, have many dimensions which are summarized as follows:

1. Cognitive orientation: (a) Perceptions, beliefs, expectations concerning attributes of object. (b) Other cognitive processes with regard to object.
2. Affective orientation: (a) Net positive-negative affect. (b) Specific affects.
3. Policy orientation: (a) General principle ('What should be done'). (b) Personal prediction ('What would I do if . . . ?'). (c) Personal commitment ('What should--or must--I do?'): (i) Judgment as to what 'I should do'; (ii) Urgency to do it--Guilt feelings, self castigation, etc., over not doing it.
4. Degree of uncertainty or conviction with regard to 1 and 3; intensity with regard to 2.
5. Degree of covertness or overtness.
6. Degree of consistency (or ambivalence): (a) Within 1, 2, 3, 4 and 5. (b) Between 1, 2, 3, 4 and 5.

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7. Degree of salience of object in personal life space: (a) Frequency of contact with object. (b) Avoidability-unavoidability of contact with object. (c) Perceptual salience of object. (d) Ego involvement with object. (e) Other motivational involvement with object.
8. Consciousness-unconsciousness of attitude.
9. Tenacity (resistance to change) of 1, 2, 3, 4, 5, 6, 7, 8.
10. Isolation from or interdependence with other attitudes (Duijker, 1955, p. 560).

All of these dimensions (and possibly more) represent possibilities for independent variation and the list highlights the many problems inherent in the study of attitudes within the framework of a single culture. These problems, as Duijker (1955) emphasizes, are multiplied in comparative research.

> A strict comparison of attitudes would mean a comparison on all dimensions simultaneously. This ideal will perhaps prove irrealizable; but the least we can and must do is to include in our research design as many dimensions as possible. A multi-dimensional approach to comparative research seems to be our only hope of obtaining valuable results (p. 561).

The position is taken here that constructing an attitude scale based on principles derived from Guttman's facet theory (Guttman, 1959), such as will be described in the following chapter, provides the most fruitful means of controlling for and including in one's research design the greatest number of attitudinal content, structure, and intensity dimensions or components described in the preceding list.

Suchman (1964) has suggested yet another problem prevalent in cross-cultural research in general, i.e.,

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lack of *a priori* hypothesis formation. He states that a great deal of the current inadequacy of comparative studies can be traced to an initial lack of consideration given to the formulation of hypotheses which are meaningful for comparative purposes.

> These hypotheses are usually formulated *ex post facto* and sometimes represent a rather desperate attempt to find, within a series of disconnected studies, data bearing upon similar hypotheses. This lack of comparative data is probably one of the main reasons why cross cultural comparisons have been so unsuccessful in the past. . . . A real need still exists for the formulation of comparative hypotheses preceding the collection of data (p. 134).

Suchman (1964) also points out that while it is difficult to tell whether one group is "more prejudiced" or has a "poorer attitude" than another group, it is less difficult to determine whether, within both groups, prejudice is related to some other variable, such as contact. Suchman feels that truly comparative hypotheses will be more successful on a correlational level which goes beyond the simple demographic or census level of description.

While it is beyond the scope of the present discussion to describe the design of the larger international study of which this research is a part, it should become apparent in the subsequent chapters that Suchman's criticisms have been heeded in the present design--which is to say, the research is largely correlational and a number of *a priori* hypotheses have been formulated.

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In cross-cultural or cross-national research, if the concepts to be tested in the several laboratories of different cultures are to be comparable, a great deal of attention must be paid to instrument and sampling equivalency. Since the present international research is concerned with attitudes and since attitudes are imbedded in and form a part of a culture specific way of life, it is quite clear that identical instruments cannot be used in different cultures. An attitude scale used in the United States cannot be used in the same form (translated literally) in France or Germany. As Duijker (1955) and others (e.g., Suchman, 1964; Jordan, 1968) have emphasized, the instruments must not be necessarily identical, but rather, equivalent so that the results obtained with them are similar enough to be comparable. The determination of concept equivalence in translating an instrument from one language to another of course demands prior knowledge of and familiarity with the cultural meanings of the various concepts in question. The accurate translation of questions from one language to another is very difficult and requires the assistance of competent personnel familiar not only with the language in question but with local cultural considerations as well.

Similarly, a degree of specialized knowledge of local circumstances is mandatory in the selection of

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samples. Again, the concern in sample selection is with comparability, which in turn demands the selection of equivalent but not necessarily identical samples since the samples must be adapted to the specific situation within each nation.

Duijker (1955) states that the type of local knowledge most helpful in comparative research is of two kinds: explicit knowledge, based upon methodical research, and implicit knowledge, acquired through long participation in and familiarity with the way of life of a people. This combination is found most readily in social scientists belonging to the various nations being compared. In the present study, this ideal combination of specialized knowledge and assistance was obtained through the services of Dr. Hartmut Horn, Associate Professor of Special Education and Educational Psychology in the Department of Special Education of the Ruhr College of Education in Dortmund (Seminar fuer Heilpaedagogische Psychologie der Paedagogische Hochschule Ruhr, Abteilung fuer Heilpaedagogik in Dortmund).

Dr. Horn has an extensive background in Germany in education, sociology, and general psychology as well as test construction and development, and his special interest area has been and is the social-psychology of disability. In addition, his interest in cross-cultural research is attested to by his long association with the

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Deutschen Institut Fuer Internationale Paedagogische Forschung (German Institute for International Research in Education) in Frankfurt.

Extensive correspondence and several days of personal collaboration in Dortmund were accomplished with Dr. Horn who was largely responsible not only for the translation of the research questionnaire into the German language but also for equivalent sample selection. In addition, Dr. Horn personally supervised the logistical problems involved in printing the translated instrument, securing the appropriate samples, administering the research instrument, transferring the obtained data to IBM answer sheets, and dispatching the latter to Michigan State University for analysis. All of this was accomplished between August, 1968 and May, 1969.

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CHAPTER III

INSTRUMENTATION AND VARIABLES

A German translation of a new instrument developed by Jordan (1969)--the Attitude Behavior Scale-Mental Retardation (ABS-MR)--was employed in this study. The construction of the ABS-MR scale (Appendix A) was guided by a facet design which makes it possible to construct items by a systematic a priori design instead of by the method of intuition or by the use of judges. Guttman's facet theory (Guttman, 1959, 1961) specifies that the attitude universe represented by the item content can be sub-structured into components which are systematically related according to the number of identical conceptual elements they hold in common. The sub-structuring of an attitude universe into components or elements facilitates a sampling of items within each of the derived components, and also enables the prediction of relationships between various components of the attitude universe. This should also provide a set of clearly defined component areas for cross-national, cross-cultural, and/or sub-cultural comparisons.

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Facet Theory and the ABS-MR Scale (Criterion)

Succinctly stated, what is sought by facet design and analysis is to be able to construct the content of a scale by a semantic, logical, a priori technique and to be able to predict the order structure which would result from the empirical data. What would happen then would be the reverse of what in reality factor analysis accomplishes. Factor analysis tries to make sense out of what already has been done by a mathematical process of forming correlational clusters and then naming them, i.e., calling them factors. As opposed to this approach, facet design, in essence, names the facets before one begins.

Guttman's Four Level Theory

In an analysis of research on racial attitudes by Bastide and van den Berghe (1957), Guttman proposed that in respect to intergroup attitudes and behavior there are three necessary facets which may be combined according to definite procedures to determine the semantic component structure of four important sub-universes or levels of the attitude universe. Figure 1 presents these facets.

One element from each and every facet must be represented in any given statement, and these statements can be grouped into profiles of the attitude universe by multiplication of the facets A x B x C, yielding a

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Facets

(A) Subject's Behavior	(B) Referent	(C) Referent's Intergroup Behavior
a_1 belief	b_1 subject's group	c_1 comparative
a_2 overt action	b_2 subject himself	c_2 interactive

Fig. 1.--Basic facets used to determine component structure of an attitude universe.

2 x 2 x 2 combination of elements or eight semantic profiles in all, i.e., (1) $a_1b_1c_1$, (2) $a_1b_1c_2$, . . . (8) $a_2b_2c_2$. It can be seen that permutations 1 and 2 have two elements in common (a_1b_1) and one different (c_1 and c_2), whereas profiles 1 and 8 have no elements in common.

Using the Bastide and van den Berghe (1957) research as a basis, Guttman (1959) was able to facetize the semantic structure of their attitude items into the four attitudinal sub-universes or levels as shown in Figure 2. Guttman reasoned that if an attitude item can be distinguished semantically by the three facets ABC outlined in Figure 1, then an individual item could have one, two, or three subscript "2" elements for a total of four attitude levels. Logically, if the elements are correctly ordered within facets, and if the facets are correctly ordered with respect to each other, a semantic analysis of attitude items will reveal n + 1 types or levels of attitude items. While a total of eight permutations are possible on the four levels (one each on

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levels 1 and 4 and three each on levels 2 and 3) only the four permutations shown in Figure 2 were studied by Bastide and van den Berghe (1957).

Level	Profile	Descriptive Label
1	$a_1b_1c_1$	Stereotype
2	$a_1b_1c_2$	Norm
3	$a_1b_2c_2$	Hypothetical Interaction
4	$a_2b_2c_2$	Personal Interaction

Fig. 2.--Facet profiles and descriptive labels of attitude levels.

The model in Figure 2 depicts the attitudinal levels and the descriptive labels for each level defined by Guttman (1959). An attitude item corresponding to level 1 would deal with the belief of the subject (a_1) that his group (b_1) compared itself (c_1) favorably or unfavorably with the attitude object in question, in this case members of a different racial group. Similarly, an item corresponding to level 4 would deal with the subject's own (b_2) reported behavior (a_2) in interacting (c_2) with the attitude object.

A common meaning for the orderings was suggested by Guttman, i.e., they show in each case a progression from a weak to a strong form of behavior of the subject toward the attitude object. That is, the more subscript "2" elements a set contains, the greater the strength of the attitude or behavior.

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Facet analysis of the semantic structure of attitude items provides a social psychological theoretical basis for predicting the structure of the empirical intercorrelation matrix of Guttman's four levels: if items are written to correspond to each of the four levels, then levels closest to each other should be more similar and thus should correlate more highly with each other than with more distant levels.

> One cannot propose to predict the exact size of each correlation coefficient from knowledge only of the semantics of universe ABC, but we do propose to predict a pattern or structure for relative sizes of the statistical coefficients from purely semantic considerations (Guttman, 1959, p. 324).

This prediction was stated by Guttman (1959) as the Contiguity Hypothesis which states that subuniverses or attitude levels closer to each other in the semantic scale of their definitions will also be closer statistically. In other words, the intercorrelations should reveal an ordering such that the maximum predictability of each level is attainable from its immediate neighbor or neighbors alone.

Stated differently, the resulting correlation matrix should reveal what Guttman (1966) has termed a "simplex" ordering. A simplex exhibits the characteristics of (a) ascending correlations starting from the zero point (where the two coordinates meet) to the end points of either axis, and (b) closer correlations

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between adjacent levels than correlations separated by one or more levels. Consequently, level 1 would correlate higher with level 2 than it would with level 3 but higher with level 3 than with level 4; level 2 would correlate higher with levels 1 and 3 than with level 4 and so forth. An example of an hypothetical matrix of level by level correlations illustrating the characteristics of a simplex is presented in Table 1. When Guttman (1959) rearranged the data of Bastide and van den Berghe (1957) according to the semantic structural considerations of facet theory, this predicted simplex relationship was essentially obtained, i.e., there was only one reversal in the predicted structure.

TABLE 1.--Hypothetical matrix of level-by-level correlations illustrating simplex characteristics.

Level	1	2	3	4
1	---			
2	.60	---		
3	.50	.60	---	
4	.40	.50	.60	---

Jordan's Six Level Adaptation

Guttman's (1959) paradigm of facet design and analysis for attitude items allows for three facets and hence four levels of attitudes. Theorizing that there might be

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other pertinent facets, but accepting those identified by Guttman as appropriate, Jordan (1968) expanded facet analysis for attitude items dealing with specified groups to include five facets and hence six levels. This expanded and more inclusive set of facets and their elements is shown in Figure 3.

Conjoint struction in this model is operationally defined as the ordered sets of the five facets of Figure 3 from low to high across all five facets simultaneously (Jordan, 1968). It is that part of the semantic structure of attitude items which can be determined independently of item content. In other words, conjoint struction defines the level of attitude being measured.

It will be noted that the multiplication of facets ABCDE yields a possible 32 combinations of elements; not all combinations are logical because of semantic considerations, however, and the selection of a "best" set of components from the 32 possible was still partly a matter of judgment at the time of the construction of the ABS-MR scale. Maierle (1969) later extended research in this area by providing a set of logical rules for the selection of permutations and found that 12 of the possible 32 permutations were semantically consistent. In constructing the ABS-MR, however, six of these element combinations or permutations seemed particularly fruitful and these six combinations represent the six levels of

Facets

(A) Referent	(B) Referent Behavior	(C) Actor	(D) Actor's Intergroup Behavior	(E) Domain of Actor's Behavior
a_1 others	b_1 belief	c_1 others	d_1 comparison	e_1 hypothetical
a_2 self	b_2 experience	c_2 self	d_2 interaction	e_2 operational

Fig. 3.--Basic facets used to determine conjoint struction of an attitude universe.

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attitude strength measured by the ABS-MR and shown in Figure 4. Figure 4 shows levels of attitude strength, the element composition of the profiles, and a descriptive term for each profile or level used in the ABS-MR. Each successive level changes on only one facet so that the profiles have a semantic simplex ordering from least complex, with complete absence of subscript "2" elements, to most complex where all elements are subscript "2" elements.

Type-Level	Facet Profile	Descriptive Name
1	$d_1a_1c_1b_1e_1$	Societal Stereotype
2	$d_2a_1c_1b_1e_1$	Societal Interactive Norm
3	$d_2a_2c_1b_1e_1$	Personal Moral Evaluation
4	$d_2a_2c_2b_1e_1$	Personal Hypothetical Behavior
5	$d_2a_2c_2b_2e_1$	Personal Feelings
6	$d_2a_2c_2b_2e_2$	Actual Personal Behavior

Fig. 4.--Attitude level, profile compositions, and descriptive names for six level attitude universe measured by the ABS-MR.

Figure 5 incorporates the data presented in Figures 3 and 4 and shows how the semantic structure of the six attitudinal levels of the ABS-MR is specified by the element composition or facet profile of each level. All items in the six sub-scales of the ABS-MR (Appendix A) evolved directly from the facet design depicted in

Level	Model Reality	Operational Statements	Descriptive Name
1	$d_1a_1c_1b_1e_1$	$Others_{a_1}$ $believe_{b_1}$ $others_{c_1}$ $hypothetically_{e_1}$ $compare_{d_1}$ to the mentally retarded.	Societal Stereotype
		$Others_{a_2}$ $believe_{b_2}$ $others_{c_2}$ $hypothet-$	

Level	Facet Profile	Definitional Statements	Descriptive Name
1	$d_1a_1c_1b_1e_1$	Others$_{a_1}$ believe$_{b_1}$ others$_{c_1}$ hypothetically$_{e_1}$ compare$_{d_1}$ to the mentally retarded.	Societal Stereotype
2	$d_2a_1c_1b_1e_1$	Others$_{a_1}$ believe$_{b_1}$ others$_{c_1}$ hypothetically (should)$_{e_1}$ interact$_{d_2}$ with the retarded.	Societal Norm
3	$d_2a_2c_1b_1e_1$	I_{a_2} believe$_{b_1}$ others$_{c_1}$ hypothetically (should)$_{e_1}$ interact$_{d_2}$ with the retarded.	Personal Moral Evaluation
4	$d_2a_2c_2b_1e_1$	I_{a_2} believe$_{b_1}$ I_{c_1} hypothetically (would)$_{e_1}$ interact$_{d_2}$ with the retarded.	Personal Hypothetical Behavior
5	$d_2a_2c_2b_2e_1$	I_{a_2} experience (affect)$_{b_2}$ when I_{c_2} hypothetically$_{e_1}$ interact$_{d_2}$ with (think about) the retarded.	Personal Feelings
6	$d_2a_2c_2b_2e_2$	I_{a_2} have experience$_{b_2}$ myself$_{c_2}$ in operationally (actually)$_{e_2}$ interacting$_{d_2}$ with the retarded.	Actual Personal Behavior

Fig. 5.--A definitional system for the conjoint struction of the Attitude Behavior Scale-Mental Retardation.

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Figure 5 and correspond to the definitional statements for each level illustrated in this figure. In other words, the introductory statements for all items on the first level of the ABS-MR (exclusive of those items measuring attitude intensity) correspond to the definitional statement for level 1 in Figure 5; all item stems on the second level of the ABS-MR correspond to the definitional statement for level 2 in Figure 5, and so forth down through level 6.

Up to this point in the discussion the focus has been on what has been defined by Jordan (1968) as "conjoint struction," which refers to the differences between scale levels of the ABS-MR on facets A through E. The counterpart to conjoint struction, which specifies attitude level, is "disjoint struction," which specifies and differentiates the content of the items of the ABS-MR through five additional facets F through J. The five additional facets specifying item content, or disjoint struction, and the relationship between conjoint and disjoint struction on the ABS-MR are shown in Figure 6 in the form of a mapping sentence. Facets K and L in Figure 6 also illustrate the scales "response mode struction," i.e., the degree of favorableness and intensity with which the subject responds to the items structured by facets A through J. Thus, every response of every subject corresponds to a combination of elements in facets

CONJOINT STRUCTION

	(A) Referent	(B) Referent Behavior	(C) Actor	(D) Actor's Intergroup Behavior	(E) Domain of Actor's Behavior
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CONJOINT STRUCTION

	(A) Referent		(B) Referent Behavior		(C) Actor		(D) Actor's Intergroup Behavior		(E) Domain of Actor's Behavior
(Subject attributes to)	a_1 others a_2 self	(the)	b_1 belief b_2 experience	(that the)	c_1 others c_2 self		d_1 compare (s) d_2 interact (s)		e_1 hypothetically e_2 operationally

DISJOINT STRUCTION

	(F) Life Situations		(G) Importance		(H) Evaluation Process	
(with the mentally retarded in)	f_1 personal traits f_2 primary group relations f_3 recreation f_4 education f_5 employment f_6 health, welfare and legislation f_7 sex and family f_8 secondary group relations	(involving)	g_1 high g_2 medium g_3 low	(level of importance)	h_1 with respect to h_2 because of h_3 despite	(their)

RESPONSE MODE STRUCTION

	(I) Trait Type		(J) Trait Level		(K) Valence		(L) Intensity	
	i_1 cognitive i_2 affective i_3 physical-behavioral		j_1 attributed handicap j_2 actual disability	(with)	k_1 negative k_2 neutral k_3 positive	(valence and)	l_1 low l_2 medium l_3 high	(intensity)

Fig. 6. A mapping sentence of the conjoint, disjoint, and response mode struction facets used to structure the Attitude Behavior Scale-Mental Retardation.

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K and L for every attitude item, which in turn corresponds to a combination of elements for each and every facet A through J--with the exception of those items on level 5. At the time of the construction of the ABS-MR the ordering system had not been as fully developed for disjoint struction as it had for conjoint struction. Consequently, it was not possible to structure items on level 5 (Personal Feelings) beyond the conjoint facets A through E and the response mode facets K and L. As a result, items on this level simply ask for general feelings about the retarded without ordering these feelings to the specific situations represented by the disjoint facets F through J.

Guttman (1959) has suggested that any coherent theory referring to empirical research can be expressed in a mapping sentence similar to that shown in Figure 6 and that "lack of theoretical clarity as to the specification of the facets of the mapping may be the situation that often impedes the connection between abstract theory and empirical work (p. 323)."

From the complete facet design illustrated in Figure 6, twenty content items, each with a corresponding measure of intensity (described in the following section), were selected for each of the six levels of the ABS-MR so that the final attitude scale consisted of 240 items.

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An ideal, complete research project, as Guttman (1959) proposed in another context, would consist of observing a value of K and L for each subject on each variant of facets F through J for each level permutation of facets A through E. Clearly, studies using the ABS-MR scale will fall short of this ideal. Nevertheless, this instrument represents what is believed to be the first attitude scale constructed on an a priori basis according to facet theory. The ABS-MR was the first of a family of scales to be developed using a facet theory model (Jordan, 1968). The second and third scales developed through this approach, measuring racial attitudes and attitudes toward the emotionally disturbed respectively, have already been successfully employed in studies by Erb (1969), Hamersma (1969), and Maierle (1969).

Intensity

Guttman and Foa (1951) have emphasized the importance of intensity measures in attitude scales.

> A single question ordinarily cannot distinguish between changes due to intensity and those due to direction. A change in response to a single question may be due to either factor, or to both. Since any single question is usually biased, as is easily seen from the theory of scale and intensity analysis, the use of a single question for the study of effect, or change, or even for comparing groups, is quite inadvisable (p. 53).

Suchman (1950) has suggested that the intensity of attitudes may be estimated by asking a question about intensity immediately following a content question.

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> 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 each content question yields a series of intensity answers. Using the same procedure as for content answers, these are scored and each respondent is given an intensity score (p. 219).

This latter procedure was adopted to measure the intensity of attitudes on the ABS-MR. On levels 1 through 5, the three alternatives "not sure," "fairly sure," and "sure" are presented to the question "How sure are you of this answer?" after each content item in these scales. A variation of this procedure was used on level 6 to determine whether a reported experience with the retarded was "unpleasant," "in between," or "pleasant."

Standardization Study

The ABS-MR was administered to three groups in a standardization study: (a) 88 MSU graduate students (46 female, 42 male) in a course in medical information for rehabilitation counselors and special education teachers--students studying to be professionals in the area of disabling or handicapping conditions, (b) 633 regular education students (426 female, 207 male) at the sophomore level and constituting all MSU education students at that level during the 1968 Winter Term, and (c) 523 elementary school teachers (381 female, 142 male) in Belize (British Honduras). The groups were chosen on the basis of a presumed difference in age, education, and

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cultural orientation, as well as knowledge and experience regarding mental retardation.

Validity

In somewhat of an understatement, Anastasi (1961) has said "the validation of attitude measures presents a difficult problem (p. 545)." In the years since Anastasi's statement the problem has apparently not been further resolved. One aspect of this problem involves the relationship between "public" and "private" attitudes: how do the individual's publicly expressed attitudes compare with the opinions he voices in conversation with intimate friends or with the stranger he never expects to see again? This aspect of the problem, it would seem, is largely insolvable beyond attempts to assure the subject that his responses will remain completely anonymous. This procedure was employed in the standardization study as well as in the research in Germany.

Another aspect of the validity problem, as outlined by Anastasi (1961), concerns the relationship between verbal and non-verbal overt behavior. In other words, does the individual suit his actions to his words?--or to his attitude scale score? Anastasi points out that discrepancies between verbally expressed attitudes and overt behavior have been noted in several studies. The attitude items in the ABS-MR scale, as

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in all attitude scales, are verbalizations of behavior; the advantage inherent in an attitude scale based on facet theory, however, is that the verbalizations refer to different levels of behavior and go beyond the usual stereotypic, comparative, abstract and hypothetical levels of most attitude scales to verbalizations about affective experiences and concrete, overt behavior. If the relationship between verbal attitudes and overt behavior is ever to be further specified, it may well be through a facet theory approach. The inclusion of level 6--actual reported behavior--in the ABS-MR scale, for example, provides the opportunity to predict and analyze which of the other five levels correlate highest with this "actual behavior" level.

Table 2 shows the "conjoint" intercorrelation matrices for the three sample groups employed in the standardization study. It will be noted that for the two MSU samples, level 5, "personal feelings," showed the highest correlation with level 6, as predicted by facet theory and Guttman's (1959) Contiguity Hypothesis. For the Belize sample, the highest correlation obtained for level 6 was with level 4--"personal hypothetical behavior." In general support of the facet theory approach, it would appear from these results that what an individual says he 'would' do and what he 'feels' toward the retarded are better predictors of his behavior than what he thinks 'should' be done.

TABLE 2.--Correlation matrices of conjoint struction for standardization groups on the six level ABS-MR.

TABLE 2.--Correlation matrices of conjoint struction for standardization groups on the six level ABS-MR.

MSU Graduate Students[1]							MSU ED 200 Students[2]							Belize Teachers[3]						
Level	1	2	3	4	5	6	Level	1	2	3	4	5	6	Level	1	2	3	4	5	6
1	---						1	---						1	---					
2	.56[4]	---					2	.44[5]	---					2	.22[6]	---				
3	.17	.34	---				3	.05	.21	---				3	.11	.32	---			
4	.10	.12[7]	.48	---			4	.15	.21	.55	---			4	.21	.28	.39	---		
5	.04	.13	.08	.24	---		5	.17	.12	.19	.38	---		5	.17	.06	.19	.31	---	
6	.01	.05	.04	.13	.21	---	6	.01	.04	.05	.19	.22	---	6	.13	.10	.15	.32	.16	---

[1] $N = 88$.

[2] $N = 633$.

[3] $N = 523$.

[4] Critical value of r at .05 level = .18.

[5] Critical value of r at .05 level = .08.

[6] Critical value of r at .05 level = .09.

[7] Reversals in simplex ordering are underlined.

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Chapter IV.

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It will be noted too that the obtained correlation matrices for the three groups form approximate simplexes as predicted by conjoint struction facet theory and the Contiguity Hypothesis--which states that the correlations between levels should decrease in relation to the number of steps the two levels are removed from each other--thus providing some additional support for the validity of these concepts. There were three reversals from the hypothesized ordering for the MSU graduate students, four for the MSU sophomores, and five for the Belize teachers. Kaiser (1962) has suggested a procedure for testing a simplex approximation and this procedure, along with its application to the present data, will be described in Chapter IV.

To return to the general concept of validity, Anastasi (1961) has pointed out that many attitude studies are conducted for the stated purpose of systematically exploring verbally reported attitudes. In such a case, she feels, the criterion itself should be defined in terms of verbally expressed attitudes. Given that this is a legitimate assumption, what too often happens is a resort to a superficial kind of content validity based upon a cursory examination and classification of topics to be covered. It would appear that the method of selecting item content on a systematic basis through the use of facet theory and a mapping sentence, as was done in the

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case of the ABS-MR, is far superior to previous methods in assuring that a representative sample of the desired behavior domains is selected. Through this method it becomes a relatively simple matter to plot out the elements and facets one wishes to include and to construct scale items to meet this criterion, thus assuring that all desired elements are represented.

One final way in which attitude scales are sometimes validated is through the use of contrasted groups as a special instance of concurrent validation. In concurrent validation procedures generally, the relationship between test scores and indices of criterion status obtained at approximately the same time is examined. With the method of contrasted groups, the reasoning is that the groups have gradually become differentiated through the multiple demands of daily living in some important way with respect to the criterion in question (Anastasi, 1961).

As previously stated, the standardization groups were chosen on the basis of a presumed difference in age, education, knowledge and experience regarding retardation, and cultural orientation. In particular, it was assumed that the special education-rehabilitation graduate students (SER) would have more favorable attitudes toward mental retardation than the education sophomores (ED 200) and the Belize teachers, and, if such a difference

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were reflected on the ABS-MR, this could be interpreted as providing concurrent validation data for this instrument.

Table 3 shows the content and intensity mean scores and analysis of variance results for the three sample groups (also broken down into total male and total female groups), as well as for the independent variables (variables 15 through 36 in this table) to be described in a subsequent section of this chapter.

Examination of Table 3 reveals that the SER group did in fact obtain a significantly higher total content score (variable 7) than the ED 200 sample, thus providing some support for the concurrent validity of the ABS-MR. It is interesting to note, however, that the ED 200 group scored signifiantly higher than the SER group on the stereotypic level 1 of the ABS-MR, as did the Belize sample. The latter group's significantly higher scores on levels 1 and 2 in fact offset its significantly lower score on level 6 to the point where the Belize sample obtained a significantly higher total mean score than did the SER group. This finding highlights the utility of the facet approach to attitude construction, for looking at the total scores only for these two groups it would appear that the Belize teachers have more positive attitudes toward retardation, contrary to expectation, than students studying to be professionals in the area of

TABLE 3.--Sample sizes, means, t tests and multiple means results for the ABS-MR[1] for the SER[2], ECF 200[3], and Belize samples.

TABLE 3.--Sample sizes, means, F tests and multiple means results for the ABS-MR[1] for the SER[2], ED 200[3], and Belize samples.

	VARIABLE	ED 200 = E		SER = S		BELIZE = B		FEMALE = F		MALE = M			F	Sig[4] of F	Multiple Means Tests[5] P <.05
		N	Mean	Adj'd	N	Mean	Adj'd	N	Mean	N	Mean	Adj'd			
Attitude Content	1. Stereo	633	32.79	32.79	88	30.89	30.87	523	35.57	35.57	846	33.90	33.80	398	33.66	33.88	34.90	<.0005	E > S, B > E, B > S
	2. Norm	633	35.63	35.63	88	36.00	35.94	523	40.91	40.93	846	37.88	37.76	398	37.86	38.13	59.02	<.0005	B > E, B > S
	3. Moral	633	44.48	44.48	88	48.09	48.04	523	45.56	45.57	846	44.95	44.94	398	45.27	45.28	5.66	.001	S > E, B > E
	4. Hypo	633	42.76	42.75	88	45.38	45.37	523	41.98	42.01	846	42.35	42.41	398	43.70	43.07	8.58	<.0005	S > E, E > B, S > B
	5. Feel	633	39.80	39.80	88	39.13	39.03	523	39.84	39.96	846	39.84	39.82	398	40.18	40.21	1.38	.251	----------
	6. Action	633	27.33	27.31	88	32.80	32.53	523	31.02	31.09	846	28.74	28.73	398	30.40	30.42	49.45	<.0005	B > F, S > E, B > E, S > B
	Total	633	222.79	222.75	88	230.27	229.68	523	234.99	235.16	846	227.45	227.25	398	230.57	230.99	37.62	<.0005	B > F, S > E, B > S
Attitude Intensity	8. Stereo	635	40.71	40.70	88	43.44	43.23	523	46.38	46.44	846	42.96	42.85	398	43.98	44.20	74.08	<.0005	B > F, S > E, B > E, B > S
	9. Norm	633	40.71	40.69	88	42.19	41.94	523	44.47	44.54	846	41.95	41.87	398	43.54	43.91	27.23	<.0005	B > F, B > E, B > S
	10. Moral	633	45.19	45.18	88	48.20	48.09	523	46.33	46.38	846	45.48	45.51	398	46.95	46.88	50.57	<.0005	B > F, B > E, B > S, S > E
	11. Hypo	633	45.97	45.96	88	51.27	51.25	523	48.38	48.39	846	47.29	47.31	398	47.51	47.45	17.64	<.0005	S > E, B > E, S > B
	12. Feel	633	45.82	45.81	88	50.44	50.29	523	47.28	47.32	846	46.42	46.45	398	47.50	47.42	10.20	<.0005	B > F, S > E, B > E, S > B
	13. Action	633	46.00	45.97	88	38.22	37.89	523	43.48	43.57	846	45.33	45.41	398	41.90	41.61	217.31	<.0005	B > F, S > F, S > E, B > S
	Total	633	264.39	264.30	88	274.77	273.58	523	286.33	286.66	846	263.43	263.52	398	271.28	271.09	7.75	<.0005	B > F, S > E, B > S
Value	15. Efficacy Cont.	633	22.86	22.85	88	23.15	23.06	523	24.46	24.49	845	23.37	23.33	398	23.94	24.02	30.08	<.0005	B > F, S > E, B > S
	16. Efficacy Int.	633	27.50	27.49	88	27.28	27.12	523	28.52	28.56	845	27.61	27.58	398	28.55	28.62	11.87	<.0005	B > F, S > E, B > S
Race	17. MR Knowledge	416	2.73	2.73	86	3.34	3.30	508	2.59	2.58	824	2.78	2.79	386	2.58	2.55	16.11	<.0005	F > M, S > E, B > E, S > B
Contact	18. HP Amount	622	2.46	2.46	88	3.59	3.57	493	2.45	2.46	813	2.47	2.49	390	2.60	2.65	19.48	<.0005	S > E, B > S
	19. HP Avoid	622	3.49	3.49	88	3.25	3.21	490	2.57	2.58	811	3.09	3.11	389	3.43	3.40	44.37	<.0005	B > F, E > S, E > B, S > B
	20. HP Income	354	1.37	1.37	61	4.08	4.08	266	1.62	1.62	399	1.65	1.72	224	1.84	1.72	114.09	<.0005	S > E, B > E, B > S
	21. HP Alter	582	1.63	1.63	75	4.08	4.05	444	1.73	1.73	733	1.74	1.78	368	2.02	1.94	74.46	<.0005	S > E, B > S
	22. MR Amount	619	1.85	1.85	87	2.97	2.93	468	2.26	2.26	788	2.04	2.06	386	2.20	1.94	25.54	<.0005	S > E, B > E, B > S
	23. MR Enjoy	622	3.15	3.15	87	4.14	4.13	494	3.34	3.34	817	3.27	3.29	386	3.34	3.34	15.30	<.0005	S > E, B > E, S > B
Demographic	24. Age	632	1.41	1.41	88	2.35	2.33	517	1.85	1.84	844	1.65	1.65	393	1.81	1.81	71.54	<.0005	B > F, S > E, B > E, S > B
	25. HS Amount	632	4.01	4.01	88	4.82	4.81	492	3.89	3.89	819	3.83	3.89	393	3.79	3.72	282.75	<.0005	S > E, B > E, B > S
	26. HS Report.	630	3.48	3.49	88	3.89	3.94	520	4.48	4.46	843	4.24	4.22	393	3.82	3.96	134.93	<.0005	B > F, S > E, B > E, B > S
	27. Bal-Alter.	628	3.50	3.50	88	3.75	3.79	520	3.93	3.94	841	3.79	3.78	396	3.52	3.53	17.90	<.0005	F > M, S > E, B > E
Change Orientation	28. Self Change	632	2.48	2.38	88	2.65	2.66	520	2.42	2.42	843	2.49	2.49	397	2.43	2.42	2.56	.05	E > S
	29. Child Rear	631	2.98	2.98	88	2.93	2.93	520	3.54	3.54	842	3.21	3.19	397	3.20	3.23	62.10	<.0005	B > E, B > S
	30. Birth Control	630	3.46	3.46	88	3.57	3.58	519	2.60	2.60	840	3.11	3.13	397	3.10	3.06	138.36	<.0005	F > M, E > B, S > B
	31. Accumulation	632	3.18	3.18	88	3.33	3.31	516	3.40	3.40	839	3.25	3.23	397	3.24	3.35	9.88	<.0005	M > F, B > E
	32. Pol Leaders	630	2.13	2.13	88	2.33	2.32	517	2.46	2.46	839	2.28	2.27	396	2.19	2.20	9.37	<.0005	B > E
	33. Role Adherence	628	2.80	2.79	88	2.99	2.97	520	2.46	2.47	840	2.82	2.84	396	* .73	2.74	36.84	<.0005	E > S, S > B
Retention	34. Local Aid	627	3.03	3.02	88	3.15	3.14	519	2.96	2.96	838	2.99	3.00	395	3.04	3.03	1.47	.22	----------
	35. Fed Aid	628	2.95	2.95	88	2.97	2.96	514	2.86	2.86	836	2.90	2.90	396	2.95	2.95	.11	.74	----------
	36. ED Plan	624	3.19	3.19	88	3.08	3.09	503	2.97	2.97	823	3.09	3.09	392	3.09	3.09	3.56	.001	E > B

[1]ABS-MR = Attitude Behavior Scale: Mental Retardation.

[2]M.S.U. graduate students in special education and rehabilitation, September, 1967.

[3]M.S.U. sophmore education majors, January, 1968.

[4]Belize (British Honduras) school teachers, January, 1968.

[5]Controls for sample size and sex ratio within samples.

[6]Holding constant sex.

*Roughly equivalent to Duncan's Multiple Means Test up to three means. Somewhat more liberal after three means, increasing probability to Type I error.

handicapping conditions. What would be overlooked in the ordinary analysis and what is illuminated by the facet approach is that these more positive attitudes are reflected only in the more abstract "stereotypic" and "normative" levels 1 and 2 and that the Belize group actually scored significantly more poorly on the more personal "hypothetical personal behavior" and "actual personal behavior" levels 4 and 6 of the ABS-MR than did the SER group.

In general, it may be stated that the results cited in this section provide support for the content and concurrent validity of the ABS-MR as well as for the utility and fruitfulness of the facet approach to attitude scale construction.

Reliability

It would appear that a legitimate method for assessing the reliability of the ABS-MR scale would be through a test-retest operation on the same sample which would, when correlated, produce a correlation of temporal stability. Even though the resulting correlation coefficient might be spuriously high because of item recall, this would nevertheless seem to be a viable procedure since it is generally believed that attitudes are relatively permanent (Duijker, 1955). Because of various logistical problems involved in re-assembling the large sample groups, however, it was not possible to carry out this procedure on the ABS-MR.

Another procedure for obtaining an estimate of scale reliability which seems appropriate would be through the split-half method whereby the scale is split into two comparable halves and the scores obtained are correlated and corrected by the Spearman-Brown formula. This procedure would provide a measure of equivalence, or adequacy of item sampling, across all levels of the ABS-MR.

A third seemingly appropriate method of estimating reliability would be through obtaining a measure of internal consistency for each individual scale level by computing a Kuder-Richardson type reliability coefficient for each scale level. In actuality, this was the procedure used to estimate the reliability of the ABS-MR.

Hoyt (1966) has described a formula for estimating test reliability based on analysis of variance which gives precisely the same result as formula (20) described by Kuder and Richardson (1937). A variation of Hoyt's formula, allowing for a difference between the method of scoring the ABS-MR and the scoring method used in the Hoyt and Kuder and Richardson data, was programmed into the MSU computer and was used to estimate the reliability of the ABS-MR for the three standardization sample groups on each scale level as well as the total scores on this instrument. Table 4 shows the reliability estimates obtained in this manner for each of the samples.

TABLE 4.--Hoyt reliability coefficients for ABS-MR standardization groups.

Group	ABS-MR Scale Level Reliability Coefficients						
	1	2	3	4	5	6	Total
88 M.S.U. SER Students	.74	.82	.64	.79	.85	.78	.87
633 M.S.U. ED 200 Students	.73	.83	.69	.79	.71	.67	.89
523 Belize Teachers	.63	.75	.60	.79	.76	.76	.86

Shaw and Wright (1967) have reported reliability estimates on a large number of various types of attitude scales and the figures shown in Table 4 for the ABS-MR compare very favorably with the majority of those reported in their text; thus, the reliability of the ABS-MR would certainly seem adequate for group research. In fact, the reliabilities shown for the ABS-MR total scores in Table 4 compare quite favorably to those of many tests used for individual diagnosis, evaluation, and selection described by Anastasi (1961).

It is interesting to note that the figures in Table 4 are uniformly lowest on level 3. Apparently the subjects were less sure about how others should (i.e., right-wrong behavior) behave toward the retarded, which is tapped on this level, than they were about how they themselves would behave, which is measured on levels 4-6.

Combining Content and Intensity

All of the data discussed in this chapter in reference to the standardization study has referred to subject responses to the content of each attitude item and does not have reference to the intensity with which these items were responded to. Thus, a weakly felt negative attitude response was given the same weight as a strongly felt negative response and, accordingly, strongly and weakly felt neutral responses and strongly and weakly felt positive responses were weighted equally.

As was indicated in the section of this chapter dealing with intensity, Guttman and Foa (1951) have suggested that it is "quite inadvisable" to ignore attitude intensity in comparing groups. Since the ABS-MR already contained an intensity statement following each content item on each scale level, it was decided that the content and intensity responses should be combined into one score for each item in the present research to eliminate the seemingly inappropriate response weights described above.

Accordingly, a rationale and scoring procedure was developed for combining content and intensity responses which differentially weights each combination of these two variables for every item. This procedure is fully described in Appendix B. In practical terms, the procedure has the effect of increasing the range of possible scores for each item from 1-3 (negative to positive) to 1-9 (strongly

negative to strongly positive). Theoretically, the increase in range of scores should, if anything, enhance the reliability of each item (Anastasi, 1961), which in turn should further clarify group differences and relationships between the predictor variables and the ABS-MR.

Instrument Limitations

For a number of reasons, among which may be counted the press of temporal commitments in several nations as well as the experimental nature of the task involved and the newness of the technique, which precluded falling back on established research for guidance, several shortcomings in the ABS-MR scale are readily apparent. Among these shortcomings or limitations may be mentioned the following: failing to control for (a) response sets, (b) social desirability, (c) homogeneous disjoint struction or item content on all levels, (d) alternative permutations of the facet elements, and (e) the effect of the order of scale administration on correlation matrices.

One of the first and yet unresolved problems in the development of the ABS-MR scale revoled around the assignment of response weights. The question essentially involved was: which is the "best" or most favorable response--to say that the mentally retarded are equal to or superior to other people in some positive manner? Or, stated differently, which is the "best" attitude--the most realistic one or the one denoting the most positive evaluation without necessarily

being grounded in reality considerations? It was decided finally to weight the items on a negative to positive evaluative dimension without concern for which is necessarily the most "realistic" response since there seemed to be more inherent difficulty in defining "reality" in this regard than in defining "positive evaluations." Thus, the most "favorable" response is not always the most "realistic" response.

It was decided that three alternatives would generally be presented to each question, one alternative suggesting a positive evaluation, one a negative evaluation, and the third a neutral position. Ideally, the questions and responses would have been worded so that the favorable, unfavorable, and neutral responses would have been randomly assigned to the three numbered alternatives. Thus ideally, the most favorable response on one question would be alternative 1, while on another it would be alternative 3, and so on in a random fashion. Because of the press of time and logistical problems in cross-cultural organization of the data and computer programming, however, the responses were set up so that alternative 1 always represented the least favorable response, alternative 2 always represented a neutral position, while alternative 3 always constituted the most positive response. In such a schema there exists, needless to say, a real danger of error due to response sets, or the tendency of some of the subjects to answer all

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of the questions in a similar fashion independent of the content of the particular item.

Attitude scales of this type are also susceptible to the analagous pressure of social desirability influencing various responses. This problem has been discussed in the section on validity and, as suggested in that section, the only way out of this dilemma with an instrument of this type appears to be through guaranteeing the subjects complete anonymity. Whether or not this procedure represents an adequate solution to the problem, however, remains a moot question.

It was noted too in the section on the development of the ABS-MR scale that the disjoint struction or item content was not as well controlled as the conjoint struction or attitude level. This was particularly true with regard to level 5 which, as was previously noted, was not structured on the disjoint dimension at all. Disjoint struction was also relatively uncontrolled on the other levels of the ABS-MR, which is to say that the various subscales or levels include items of different content so that the same content does not necessarily appear on all levels. Hamersma (1969), in a study of racial attitudes, employed an instrument based on Guttman facet theory in which the content of each attitude item is repeated across all six levels or sub-scales, with the item being altered only to fit the structure (conjoint struction) of the different

levels. In this manner, the item content was held constant so that the attitude structure was more easily assessed than in the present research.

It was also previously noted that multiplicaton of the two elements in each of the five conjoint struction facets yielded a possible 32 combinations or permutations of elements. The six level permutations of the ABS-MR scale were selected primarily through subjective judgment. Maierle (1969) has extended research in this area and found that of the 32 permutations which might be formed, only 12 were semantically consistent. Maierle found that varying numbers of these permutations belong to different levels; that is, if a level is defined by the number of strong or weak elements found in the attitude items of that level, then one permutation exists on level 1 of the ABS-MR, three on level 2, four on level 3, two on level 4, and one permutation each on levels 5 and 6. The violations of simplex orderings previously noted (Table 2) in the standardization data may have been due in part to the fact that four permutations are possible on level 3, the level on which most of the violations of simplex ordering have been found up to now.

Another question related to simplex ordering which has been unanswered until Maierle's (1969) research has to do with the effect of the order of scale level administration upon the resulting correlation matrix. In the present

study, as in all of the previous research in this area, all of the data has been obtained from administration of various level member sub-tests in the same order, i.e., all items of level 1 have been presented first, all items of level 2 presented second, and so forth. Maierle (1969) randomly varied the order of scale level presentation of a new Guttman facet type attitude scale to a large group of subjects and found that a better simplex approximation was obtained when correlations were plotted according to theoretical relationships than according to order of administration, thus lending further support to the theoretical assumptions involved.

Independent Variables

The instrument labeled Personal Questionnaire: MR (Appendix A) was designed to operationalize a number of independent variables suggested by the review of the literature to be determinants of attitudes toward mentally retarded persons. Many of the items in this questionnaire were used in the international study of attitudes toward physically disabled persons conducted by Jordan (1968) and all revisions in these items were made by that author.

Demographic Variables

A total of seven demographic items were included in the questionnaire which from a theoretical standpoint might correlate with, or predict, the criterion: sex, item 81;

age, item 82; amount of education, item 87; work experience in education, item 83; marital status, item 84; religious preference, item 85; and perceived importance of and adherence to religion, items 86 and 96.

Change Orientation

This set of six questions was adapted by Felty (1965) from Programa Interamericano de Informacion Popular in Costa Rica to measure attitudes toward change in the following areas: self change, items 88 and 97; child-rearing practices, item 89; birth control, item 90; automation, item 91; and political leadership change, item 92.

Educational Aid and Planning

Items were included in the questionnaire to measure opinions regarding local government aid to education (item 93), federal aid to education (item 94), as well as to who should have responsibility for educational planning (item 95).

Contact with Handicapped Persons

Questions 98 through 106 were designed to operationalize variables involved in personal contact between the respondents and handicapped persons. The items included are conceptually distinct. Item 98 reports the category of handicap with which the respondent has had the most experience; item 99 reports the kind of relationship

experienced; item 100 the frequency of contact; item 101 the ease with which the contact might have been avoided; items 102 and 103 the extent to which the respondent gained materially by the contact; while item 104 indicates the availability of alternatives to working with the handicapped. Items 105 and 106 were designed to measure respectively (a) the amount of contact, and (b) the amount of enjoyment experienced in contact with mentally retarded persons only.

Efficacy

Attitude items 107, 109, 111, 113, 115, 117, 119, 121, and 123, which appear in the questionnaire (Appendix A) under the heading "Life Situations," were adapted from a fully evolved Guttman Scale reported by Wolf (1967). Measures of intensity, or answer "certainty," i.e., items 108, 110, 112, 114, 116, 118, 120, 122, and 124, were added to the original items evolved by Wolf. In addition, four levels of intensity of aggreement-disagreement with the items replace the original "agree-disagree" dichotomy used by Wolf.

This scale was designed to measure attitudes toward man and his environment and attempts to determine the respondent's view of this relationship.

> The continuum underlying this scale ranged from a view that man is at the mercy of his environment and could only hope to secure some measure of adjustment to forces outside of himself, to a view that man could gain complete mastery of his physical and social environment and use it for his own purpose (Wolf, 1967, p. 113).

This variable has been termed "efficacy" since the scale purports to measure attitudes toward man's effectiveness in the face of his natural environment.

Knowledge About Mental Retardation

A sixteen item knowledge scale on mental retardation, items 125 through 140, was extracted from the larger General Information Inventory of Haring, Stern, and Cruickshank (1958) by Jordan (1969). These sixteen items were selected because they were specifically designed to measure the amount of factual knowledge possessed by the respondent regarding various aspects of mental retardation.

Results obtained on this scale for the MSU graduate students in special education-rehabilitation and the education sophomores described in the ABS-MR standardization section were submitted to the MSU item analysis computer program (Office of Evaluation Services, 1965). The results of this analysis indicated that seven of the items in this scale discriminated fairly well between the upper and lower 27% of each group on total scores and these items also had indexes of difficulty ranging from 42 to 71 (an index of difficulty range of 20 to 80 with an average of 50 to 60 is considered desirable). The composite score on these seven items (items 126, 127, 128, 130, 134, 139, and 140) constituted the knowledge-about-mental-retardation variable in the present research.

German Revisions

A total of eleven items in the ABS-MR scale were altered slightly in the translation into German in an attempt to attain concept equivalence. These alterations, along with several others in the questionnaire section of the instrument, are shown in the code book special instructions for Germany found in Appendix C.

Two of the items used in the translation of the items constituting the knowledge-about-mental-retardation variable (items 126 to 130 in the questionnaire section) had to be reworded somewhat to conform to the German educational system but the meanings and correct response in both cases remained unchanged. On a third item (140), however, it was decided that the correct response to a question dealing with the public reaction to mental retardation should be altered from the response of "somewhat understanding but not completely accepting," used in the American version, to "express feelings of acceptance but really feel rejecting" to conform to the specific German situation.

It will also be noted in the special instructions (Appendix C) that three questions were added to the end of the German translation of the instrument which do not appear in the original English version. One question (number 141 in the questionnaire section) was added to determine the level of mental retardation (mild, moderate, or severe) with which the respondent was most familiar since it was

felt that this might have some effect on his attitude toward the problem. A second question (142 on the questionnaire) was added specifically to determine whether the length of time a child had been enrolled in a special school for the moderately retarded had any effect on the parent of that child's attitude toward mental retardation. The third question (143 on the questionnaire) was designed to camouflage the intent of the second question since it dealt with the length of time a child may have been enrolled in a special school for the mildly retarded when in reality no parents whose children were in this category were purposely tested. It was felt that the level of vocabulary necessary to understand and complete the instrument would be beyond the capacity of the latter group of parents since, as was noted in Chapter II, they tend to emanate from the lowest socio-economic class in Germany; therefore, a sample group of these parents was not included in the present study.

CHAPTER IV

DESIGN AND ANALYSIS PROCEDURES

The purpose of the comprehensive international study[1] is to investigate the attitudes of designated groups in different nations toward the mentally retarded. Accordingly, nations were chosen at varying levels of modernization, economic development, and cultural orientation. The design of the international study, therefore, called for samples from the same groups in different nations. Analysis procedures were chosen which would permit testing the relationships specified in the hypotheses.

Sample

The original proposal for this study called for a sample from the Federal Republic of Germany composed of the following four groups:

(a) Approximately 100 Parents of Mentally Retarded Children.
(b) Approximately 100 Special Education Teachers of Mentally Retarded Children.
(c) Approximately 100 Regular School Teachers.
(d) Approximately 50-100 Employers or Manager-Executives.

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[1] See Chapter I.

The sample actually obtained very closely approximated the above originally desired figures and consisted of the following groups:[2]

(a) 147 Parents of Moderately Retarded Children.--These parents all had some connection with the Max-Wittmann-Schule in Dortmund. This school and training center provides services for 355 of the approximately 500 eligible moderately retarded or Geistigbehinderte in the Dortmund area in a program ranging from nursery school activities for 3-5 year olds to a sheltered workshop for those over 21 who are unable to compete in competitive employment (Vormfelde, 1969). Permission was obtained from the director of the school, Frau Elisabeth Vormfelde, to administer the scale and questionnaire at one of the regularly held parents' assemblies. Accordingly, the instrument was administered to a total of 137 parents at one such assembly and usable data was obtained from 125 of this group. It is not known to what extent this group is representative of all parents of children enrolled in this school although the director stated most parents show up at these assemblies from time to time in a random fashion.

At that time (Fall and Winter, 1968) an additional 55 children were on the waiting list for admittance to

[2]The source for much of the description of the sample groups was Dr. Hartmut Horn whose role in the present study was fully described in Chapter II.

the Max-Wittman-Schule. The parents of these 55 children were then surveyed by mail and 22 questionnaires of the original 55 sent out were returned in usable condition, representing a rather low net return rate of 40%. This low return rate could very well bias any findings obtained for this group.

(b) 148 Special Education Teachers of the Mildly Mentally Retarded.--This large group of teachers actually consisted of three separate sub-groups. The first subgroup was made up of 51 fully certified special education teachers of the mildly retarded (Lernbehinderte) in the Dortmund area. Approximately 85% of all such teachers in the Dortmund area belong to an organization called the Deutscher Sonderschullehrerverband (German Special Education Teachers Association) which publishes an influential journal, Zeitschrift fuer Heilpaedagogik (Journal of Special Education), and exerts considerable legislative pressure. Most (38) of this group were given the instrument at one of their regular meetings, while the remainder (13) were given a free hour during the regular school day to respond to the scale by their principals who had been present at the meeting. These teachers had all had from 2-40 years teaching experience in general and at least one year of experience in teaching the retarded.

The second sub-group consisted of 63 fully certified regular school teachers (Volkschullehrer), with a minimum of two years experience, who were enrolled in a program of study in the department of special education in the Ruhr College of Education (Paedagogische Hochschule Ruhr) in Dortmund which would lead to certification in the special education of the mildly retarded. At least three months of experience teaching the mildly retarded is a prerequisite for admittance to this program.

The third sub-group of 34 consisted of students in the same program of study who were different from the second sub-group only in that they had less than the two years teaching experience necessary for the certification examination. In all other respects they were similar to the second sub-group described above. Both of these groups completed the scale and questionnaire during their classroom time in the college.

It is felt that this overall group provides an adequate and representative sample of teachers of the mildly retarded in the Dortmund area.

(c) 74 Regular Elementary School Teachers (Volkschullehrer).--One segment of this group consisted of 22 fully certified (more than two years experience) elementary school teachers. For the most part they were principals (Volkschulrektoren) with many years experience, and all were voluntarily attending a course in vocational

guidance and counseling in the department of special education of the Ruhr College of Education in Dortmund. Similarly to the last two sub-groups described, this group was tested as part of the regular classroom procedure in the college.

The other segment of this group was made up of 52 probationary regular elementary school teachers in the Dortmund area. This group had all completed their necessary college coursework and all were employed full time in Volkschulen. All, however, lacked the two years teaching experience necessary to take the certification examination. As part of their continuing in-service training, all teachers in this category are required to participate in monthly seminars and the sample was obtained by administering the instrument to all such participants in two separate seminars.

Because of the apparent special interest area of the former group on the one hand, and because of the relative lack of experience of the latter group on the other, it is felt that findings obtained for the overall group can be generalized only with caution to Volkschule teachers in the Dortmund area in general.

(d) 84 Manager-Executives.--Approximately half of this group (38) had completed a course of study roughly equivalent to an American B.A. in Business Administration, while the other half (46) were at the final stage of their

studies. The training consisted of a three year correspondence course in business, highlighted by two one-week mandatory seminars each year, offered by the Deutsche Angestellten Akademie (German Employees Academy) which is supported by the second largest organization of employees in Germany, i.e., the Deutsche Angestellten Gewerkschaft (Union of German Employees). This course of training represents one of the most demanding correspondence courses in Germany and if successfully completed entitles the graduate to take a state examination leading to the title of Betriebswirt (Industrial Manager). Students enrolled in the D.A.A. course are generally white collar office workers in industry and commerce. Upon completion of their studies and upon meeting the certification requirements they are generally promoted to middle management supervisory positions in many different areas of commerce and industry. The training is voluntary and the students are generally upward striving and above average in intelligence. Most come from the lower middle class while many of the remainder generally have been displaced from their hereditary role in life for one reason or another, e.g., many of these students were refugees from East Germany.

All subjects in this sample were surveyed by mail. One group consisted of Summer, 1968 graduates while the second consisted of Summer, 1969 graduates. Of the 53 surveyed in the first group, 38 (72%) returned completed

instruments, while 46 of the 52 surveyed (88%) in the second group did likewise. The overall return rate of exactly 80% was considered sufficient to assure that this group was adequately represented. To what extent this group may or may not be typical of German manager-executives in general is unknown however, and any findings obtained for this group would not necessarily be valid beyond the confines of D.A.A. graduates.

(e) 71 Parents of Normal Children.--A fifth sample group of subjects was obtained which had not been anticipated in the original proposal. This group consisted of parents of normal children who were enrolled in one of the first four grades of a Dortmund elementary school who were called together for a parents' assembly. Altogether, about 140 parents were invited to this assembly and about 100 showed up. Eight or nine parents refused to take the test for one reason or another and, of the 91 who did, 20 were apparently unable to understand the directions well enough to complete the instrument correctly, resulting in 71 usable responses. Since this figure represents approximately 50% of those parents originally invited to the assembly, it is felt that any results obtained for this group cannot be safely generalized to parents of normal children in the Dortmund area with any high degree of confidence.

All in all, however, it is felt that the obtained samples were quite good, generally representative, and adequate for a study of this type.

Major Research Hypotheses

The variables employed in this study were intercorrelated to enable the examination of relationships for both content and intensity of the criterion ABS-MR scale (across each of the six levels as well as the total score) with 29 independent variables. This procedure facilitated the testing of the major research hypotheses.

Original Hypotheses

The original hypotheses were derived from Jordan's (1968) previous research into the attitudes of various groups in eleven nations toward the physically handicapped and toward education in general. Chapters I and II indicated that four classes of variables seemed to be related to attitudes: (a) demographic factors, (b) value orientation, (c) contact factors, and (d) the knowledge factor. Jordan sought to test a number of hypotheses evolving from these four classes of variables and based on previous research as well as theoretical considerations. Although a number of Jordan's hypotheses were supported, he felt that the results were not as clear cut as they should have been because of instrumentation problems, i.e., Jordan's criterion instruments seemed to be tapping primarily the

stereotypic level of what later appeared to be a six level attitude universe (Jordan, 1968).

The following hypotheses (with the exception of H-15 which stems directly from facet theory) therefore represent reformulations of findings and trends evident in the previous eleven nation study applied to a different referent and employing an attitude scale tapping a six level attitude universe. They were formulated in an effort to further explicate the relationship between attitudes and the four classes of predictor variables and will be tested in several countries as part of the international project described in Chapter I.

Relating Attitudes and Efficacy

H-1: Persons who score high in efficacy will score high in positive attitudes toward the mentally retarded.

Relating Attitudes and Knowledge

H-2: Persons who score high in knowledge about mental retardation will score high in positive attitudes toward the mentally retarded.

Relating Attitudes and Contact

H-3: The more frequent the contact with mentally retarded persons the higher will be the intensity scores on the ABS-MR, regardless of the direction (positiveness or negativeness) of attitude.

H-4: The more frequent the contact with other disability groups the higher will be the intensity scores on the ABS-MR regardless of the direction of attitude.

H-5: High frequency of contact with mentally retarded persons will be associated with favorable attitudes toward the mentally retarded if high frequency is concurrent with (a) alternative rewarding opportunities, (b) ease of avoidance of the contact, and (c) enjoyment of the contact.

Relating Attitudes and Religiosity

H-6: Persons who score high on stated importance of religion will score low on positive attitudes toward the mentally retarded.

H-7: Persons who score high on stated adherence to religion will score low on positive attitudes toward the mentally retarded.

Relating Attitudes and Demographic Variables

H-8: Amount of education will be positively related to favorable attitudes toward the mentally retarded.

H-9: Age will be positively related to favorable attitudes toward the mentally retarded.

H-10: Women will socre higher on positive attitudes toward the mentally retarded than will men.

Relating Attitudes and
Change Orientation

H-11: Persons who score high on change orientation will score high on positive attitudes toward the mentally retarded.

Relating Attitudes to
Opinions on Educational
Aid and Planning

H-12: Agreement with government aid to education will be positively related to favorable attitudes toward the mentally retarded.

H-13: Agreement with centralized government planning of education will be positively related to favorable attitudes toward the mentally retarded.

Relating Attitudes and
Group Membership

H-14: The groups will assume the following order with respect to favorable attitudes toward the mentally retarded: Teachers of the Mentally Retarded>Parents of the Mentally Retarded>Regular Teachers>Manager-Executives.

Relating Attitudes and
Multidimensionality

H-15: The ABS-MR scale levels or attitude subuniverses will form a Guttman Simplex for each of the German groups.

Additional Hypotheses

Certain special characteristics of the German sample and the addition of two questions at the end of the instrument made possible the testing of several additional hypotheses not anticipated at the time of the original hypothesis formulation. The inclusion of a group of parents of normal children was not called for in the original proposal nor was it anticipated that parents of retarded children could be categorized according to whether or not their child was in a special school, and, if so, for how long a period. In addition, it was not known originally that both regular and special education teachers would fall into clearly discernible groups based on years of teaching experience. Finally, the relationship between the type or level of mental retardation with which the subject was most familiar and his attitude toward the problem became testable because of the nature of the sample.

The additional hypotheses were based on the following reasoning:

(a) Since parents of normal children would seem to have lesser investment in the problems of the retarded than mothers of the retarded and since the former mothers were probably less well educated than the other German groups, it was assumed that their attitudes would be less favorable than those of any other group.

(b) Since education for the moderately retarded is a relatively recent innovation in Germany where these children were previously largely shunned and rejected, it was assumed that the longer a child had been attending a special school for the moderately retarded the more favorable would be the attitude of his or her parent toward mental retardation.

(c) Proctor's (1967) research in Michigan demonstrated a positive correlation between attitudes toward the physically handicapped and years of teaching experience and it was assumed that this finding would generalize to the German teacher samples and their attitudes toward mental retardation.

(d) Because of the traditional concern in Germany with the education and integration into the larger society of the mildly retarded, as opposed to the more recent programs for the moderately retarded, and because of the generally higher level of social functioning of the former group, it was anticipated that those most familiar with and knowledgeable about the mildly retarded would evidence more favorable attitudes toward mental retardation in general than those most familiar with the moderately or severely retarded.

Relating Attitudes and
Additional Group Variables

H-16: Parents of normal children will have less positive attitudes toward the mentally retarded than any other group.

H-17: Parents of moderately retarded children attending a special school will have more positive attitudes toward the mentally retarded than will parents of moderately retarded children awaiting admittance to a special school.

H-18: There will be a positive relationship between the length of time a moderately retarded child has been attending a special school and the favorableness of his parent's attitude toward mental retardation.

H-19: Experienced special education teachers of the mildly retarded will have more positive attitudes toward mental retardation than will inexperienced special education teachers of the mildly retarded.

H-20: Experienced regular teachers will have more positive attitudes toward the mentally retarded than will inexperienced regular teachers.

Relating Attitudes and Level of Retardation

H-21: Persons most familiar with the mildly mentally retarded will have more positive attitudes toward mental retardation in general than will persons most familiar with the moderately and/or severely mentally retarded.

Analysis Procedures

The Control Data Corporation Computers (CDC 3600 and 6500) at Michigan State University were used to analyze

the data which will also become an integral part of the larger comprehensive study described in Chapter I.

Descriptive Statistics

Two Frequency Column Count programs (Clark, 1964) designated as FCC-I and FCC-II were used to compile the frequency distribution for every item on the instrument. This procedure was found to be useful as a final precaution to assure that the data fed into the computer for analysis was accurate.

Correlational Statistics

In the CDC MD-STAT program (Ruble & Rafter, 1966) a great amount of data can be employed in one analysis. Separate analyses can be done for the total group and for any number of 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 were means and standard deviations for each variable and the matrix of simple correlations between all variables.

Partial and multiple correlations are also outputs of the general multiple regression model used in the CDC program at MSU (Ruble, Kiel & Rafter, 1966a). One advantage to 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 it is possible to obtain spuriously based conclusions because 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 considered in computing the correlation of each variable with the criterion, i.e., the effects of all but one variable are held constant.

The use of multiple regression analysis has been recommended by Ward (1962) because it "not only reduces the dangers in piecemeal research but also facilitates the investigation of broad problems never before considered 'researchable' (p. 206)." The multiple correlation program yields the following statistics: (a) the beta weights of all predictor variables, (b) a test of significance for each beta weight, and (c) the partial correlations between each predictor and the criterion.

Analysis of Variance Statistics

The UNEQ1 routine (Ruble, Kiel & Rafter, 1966B) was used to calculate the one-way analysis of variance statistics. This program is designed to handle unequal frequencies occurring in the various categories.

A two-way analysis of variance design for unequal n's was used to analyze group-sex interaction (Ruble, Paulson & Rafter, 1966). Since the samples were not equal in size or sex ratio within groups, all F tests were based on coefficients represented by the adjusted means. The coefficients on which the adjusted means are based equalizes or accounts for the variance in the size of the group samples. For convenience of computer programming the F statistic was used for testing of all mean differences even though differences between two means are usually tested by the t statistic; results are the same for two means using either test (Edwards, 1965).

While a significant overall F leads to rejection of the statistical hypothesis, it is not known whether every mean is significantly different from every other mean when three or more means are involved. Several multiple means tests have been proposed for determining the differences between treatment means (Winer, 1962). In this research the F test for group comparisons is the usual one with the F test used to test for differences between "adjusted means" or "pairs of groups" equal to a two tailed t test while also fully accounting for the other experimental factor. This procedure for testing for significance among multiple means is approximately equal to Duncan's Multiple Means Test (Edwards, 1965; Kramer, 1956) up to and including three treatment means. The procedure is somewhat more

liberal than Duncan's when more than three means are included, thus increasing the likelihood of Type 1 error. The procedure also does not account for non-independence among the pair-of-treatment means.

Simplex Approximation Test

Kaiser (1962) has suggested a procedure for testing a simplex approximation. Kaiser's approach may be seen as performing two functions: (a) the "sorting" and re-arranging of all possible arrangements of adjacent pairs of correlation coefficients so as to generate the best empirically possible simplex approximation, and (b) the assignment of a descriptive statistic, Q^2, to the original and re-arranged matrices. The index Q^2 is a descriptive one, with a range of 0.00 to 1.00.

A computer program was developed at MSU which (a) re-ordered the obtained level member correlations of each ABS-MR matrix by Kaiser's procedure to generate the "best" empirically possible simplex approximation, and (b) calculated the Q^2 for both the obtained and the empirically best ordering of each matrix.

At the time the present research was completed an appropriate likelihood ratio for measuring goodness of fit was not available. Mukherjee (1966) has suggested a method which appears appropriate for matrices of equally spaced correlations but neither the facet theory as

originally postulated by Guttman (1959) nor the data obtained to date indicates that the matrices have equally spaced entries.

Table 5 shows the matrices which evolved from the standardization study discussed in Chapter III. The top section of Table 5 shows the actually obtained matrices previously illustrated in Table 2 for the MSU graduate students in special education-rehabilitation (SER), the MSU education sophomores (ED 200), and the Belize teachers, along with a value of $\underline{Q^2}$ for each matrix. The lower section of Table 5 shows the $\underline{Q^2}$'s for the same data as re-ordered by Kaiser's (1962) procedure.

Examination of Table 5 indicates that the obtained matrices for the SER and ED 200 groups and the empirically "best" ordered matrices for these two groups were identical, with correspondingly identical $\underline{Q^2}$ values. For the Belize group, levels 5 and 6 are reversed in the obtained and best orderings but the increase in the $\underline{Q^2}$ value seems minimal, i.e., from .858 to .859, as a result of this re-ordering.

It will be noted that Kaiser's (1962) method of re-arranging the matrices leaves something to be desired in that it does not produce a perfect simplex criterion by which to compare obtained matrices since only adjacent pairs of correlations were re-ordered. Re-ordering of adjacent pairs only means that all possible permutations of the data are not obtained. This is made quite clear in

TABLE 5.--Q^2's for original and ordered matrices on six level ABS-MR for standardization groups.

	88 MSU SER Students	633 MSU ED 200 Students	523 Belize Teachers
Original Matrices	1 --- Q^2 = .974 2 .56 --- 3 .17 .34 --- 4 .10 .12 .48 --- 5 .04 .13 .08 .24 --- 6 .00 .05 .04 .13 .21 ---	1 --- Q^2 = .946 2 .44 --- 3 .05 .21 --- 4 .15 .21 .55 --- 5 .17 .12 .19 .38 --- 6 .01 .04 .05 .19 .22 ---	1 --- Q^2 = .858 2 .22 --- 3 .11 .32 --- 4 .21 .28 .39 --- 5 .17 .06 .19 .31 --- 6 .13 .10 .15 .32 .16 ---
	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
Ordered Matrices	1 --- Q^2 = .974 2 .56 --- 3 .17 .34 --- 4 .10 .12 .48 --- 5 .04 .13 .08 .24 --- 6 .00 .05 .04 .13 .21 ---	1 --- Q^2 = .946 2 .44 --- 3 .05 .21 --- 4 .15 .21 .55 --- 5 .17 .12 .19 .38 --- 6 .01 .04 .05 .19 .22 ---	1 --- Q^2 = .859 2 .22 --- 3 .11 .32 --- 4 .21 .28 .39 --- 5 .13 .10 .15 .32 --- 6 .17 .06 .19 .31 .16 ---
	3	3	6

Table 6. It will be recalled that a perfect simplex exhibits the characteristics of (a) descending absolute correlation coefficients moving from top to bottom in the columns, and (b) ascending coefficients moving from left to right in the rows. Table 6 shows the "best" simplexes as re-ordered by Kaiser's procedure and the "best" simplexes obtained by re-ordering the same data intuitively. It will be noted that the intuitive re-ordering produces a perfect simplex in each case with no reversals of ordering in any of the matrices whereas there are a total of 12 order reversals in the matrices re-ordered by Kaiser's procedure.

In addition, at the time of research completion there was no test of significance available for $\underline{Q^2}$. Hamersma (1969) accepted six order reversals as the maximum a 6 x 6 matrix could contain and still be accepted as approximating a simplex. He found that by this criterion, a $\underline{Q^2}$ value of .60 was minimal and that preferably a value of .70 should be used to consider a matrix as approximating a simplex.

Significance Level

The .05 level was accepted as constituting significance beyond chance level for both correlational and analysis of variance statistics in the present research. Setting the acceptable level of significance at this level results in some danger, of course, in research of this

TABLE 6.--Empirically and intuitively ordered ABS-MR matrices for standardization groups.

	88 MSU SER Students	633 MSU ED 200 Students	523 Belize Teachers
Empirical Ordering	1 --- 3 Order Reversals 2 .56 --- 3 .17 .34 --- 4 .10 .12 .48 --- 5 .04 .13 .08 .24 --- 6 .00 .05 .04 .13 .21 ---	1 --- 4 Order Reversals 2 .44 --- 3 .05 .21 --- 4 .15 .21 .55 --- 5 .17 .12 .19 .38 --- 6 .01 .04 .05 .19 .22 ---	1 --- 5 Order Reversals 2 .22 --- 3 .11 .32 --- 4 .21 .28 .39 --- 5 .13 .10 .15 .32 --- 6 .17 .06 .19 .31 .16 ---
	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
Intuitive Ordering	1 --- No Order Reversals 2 .56 --- 3 .17 .48 --- 4 .10 .13 .34 --- 5 .04 .08 .13 .24 --- 6 .01 .04 .05 .12 .21 ---	1 --- No Order Reversals 2 .55 --- 3 .21 .44 --- 4 .15 .19 .38 --- 5 .05 .12 .19 .22 --- 6 .01 .04 .05 .17 .21 ---	1 --- No Order Reversals 2 .39 --- 3 .22 .32 --- 4 .16 .21 .32 --- 5 .10 .15 .19 .31 --- 6 .06 .11 .13 .17 .28 ---

type, which employs large samples and numerous variables, of mistaking spurious yet statistically significant relationships and differences for meaningful ones. However, at the present stage of theory development, it was felt that this danger was more than offset by the cues and guides which might be provided future researchers in this area through statistically significant differences and relationships which might otherwise be overlooked at a more exacting level of significance.

CHAPTER V

ANALYSIS OF THE DATA

As indicated in Chapter IV, the data in the present research were analyzed by computer at Michigan State University. Computer analysis not only enabled the testing of the major research hypotheses but, in addition, provided cues in the data which may have implications for future research.

ABS-MR Reliability

It was pointed out in Chapter III that the ABS-MR content and intensity scores were combined into one score for each subject on each item according to the procedure described in Appendix B. In essence, this procedure had the effect of increasing the range of possible scores for each item from 1-3 (negative to positive) to 1-9 (strongly negative to strongly positive). It was felt that this increased range of scores would enhance the discriminative ability as well as the reliability of each item and hence the reliabilities of the various ABS-MR scale levels.

To test the effectiveness of this procedure, reliability estimates were obtained on the ABS-MR for the German samples on content scores alone and on the combined content-intensity scores via the Hoyt (1966) method

described in Chapter III. In addition, the mean item-to-scale-level correlations were also computed for each sample for both content and combined content-intensity scores. The resulting reliability estimates and mean item-to-scale correlations are presented in Tables 7 and 8 respectively.

Reference to Table 7 reveals that the ABS-MR reliabilities were elevated as predicted as a result of the combining procedure--particularly levels 1, 2, 3, 5 and the ABS-MR total score reliabilities. The reliabilities also increased somewhat on levels 4 and 6 but not to the degree of the other ABS-MR levels.

The figures presented in Table 8 show that the average item-to-scale level coefficients were also enhanced as a result of combining content and intensity into one score and these results support the ability of this procedure to improve individual item reliability.

The content reliability coefficients presented in Table 7 for the German groups are quite similar to those appearing in Table 4 in Chapter III for the ABS-MR standardization groups with the exception of level 6. The mean of the content reliability coefficients on level 6 for the three standardization groups was .74 while the mean for the German samples on this level is only .65. The combining procedure also had the least effect on this level and it may be that the behavior interactions described in

TABLE 7.--ABS-MR Hoyt reliabilities for content and combined content-intensity scores for German samples.

Group		Scale Level Reliability Coefficients						
		1	2	3	4	5	6	Total
148 Special Teachers	Content	.55	.73	.57	.72	.72	.67	.77
	Combined	.64	.79	.61	.74	.79	.68	.82
74 Regular Teachers	Content	.71	.80	.56	.81	.86	.71	.88
	Combined	.76	.82	.60	.81	.88	.72	.90
146 Parents of Retarded	Content	.71	.78	.67	.76	.84	.61	.82
	Combined	.74	.79	.68	.78	.84	.62	.87
84 Manager-Executives	Content	.67	.72	.63	.82	.79	.59	.81
	Combined	.71	.79	.65	.84	.83	.61	.85
70 Parents of Non-Retarded	Content	.80	.78	.72	.89	.75	.68	.90
	Combined	.82	.80	.77	.90	.76	.68	.92

TABLE 8.--ABS-MR content and combined content-intensity item-to-sub-scale mean correlations for German samples.

Group		ABS-MR Mean Item to Sub-scale Correlations					
		1	2	3	4	5	6
148 Special Teachers	Content	.34	.41	.35	.36	.41	.33
	Combined	.37	.46	.36	.40	.46	.35
74 Regular Teachers	Content	.41	.46	.34	.45	.52	.35
	Combined	.44	.49	.35	.48	.55	.35
147 Parents of Retarded	Content	.39	.45	.32	.44	.51	.31
	Combined	.41	.46	.35	.45	.52	.31
84 Manager-Executives	Content	.36	.40	.35	.47	.45	.31
	Combined	.38	.44	.36	.49	.48	.32
71 Parents of Non-retarded	Content	.45	.46	.39	.56	.42	.35
	Combined	.48	.47	.43	.57	.42	.33

this sub-scale are less appropriate to the German cultural situation than to the cultural situations of the standardization groups.

In general, however, and as was the case with the reliability figures for the standardization groups, the ABS-MR reliability estimates obtained for the German samples compare favorably with the majority of those reported by Shaw and Wright (1967) for a variety of attitude scales, and they appear adequate for the type of group research in the present study.

Major Research Hypotheses

The remainder of this chapter will be devoted to an analysis of the data as it relates to the major research hypotheses.[1] The analysis will be presented in the same order the hypotheses were presented in Chapter IV. It will be noted in connection with several correlational hypotheses that larger correlations appear for the total sample than for the individual samples, which suggests homogeneity within and differences between groups with

[1] It will be noted throughout this chapter that the figures presented in the tables do not agree exactly with the sample sizes presented in Chapter IV. This is due to a combination of incompletely filled out questionnaires, the "loss" of two subjects whose IBM cards were destroyed by the computer, and a programming error which eliminated subjects within the sample groups who did not indicate their sex. Because of the relatively large sample sizes involved it was not felt that missing data constituted a serious problem and all statistics are based on the N's reported in the tables.

regard to the predictor variables in these instances. (The means and standard deviations of the predictor variables used in this study may be found in Table 29, Appendix D.)

Relating Attitudes and Efficacy

H-1: Persons who score high in efficacy will score high in positive attitudes toward the mentally retarded.

It will be recalled from Chapter IV that the Efficacy scale was designed to measure the subject's view of man's effectiveness in the face of his natural environment. Hypothesis 1 was tested by correlating scores on the Efficacy scale with scores on the six levels and total scores of the ABS-MR. Table 9 presents these correlations for the five German sample groups and the totals for the entire sample.

Table 9 indicates there were small but statistically significant positive correlations between the Efficacy variable and the total ABS-MR score for the regular teachers and the total for all samples. Five other correlations in Table 9 reached significance: small positive correlations on levels 1 and 2 (stereotypic and normative levels) for the total sample, somewhat stronger positive correlations on level 5 (feelings) for the special education teachers and level 6 (reported behavior) for the regular teachers, and a negative correlation on level 5 for the parents of non-retarded children.

TABLE 9.--ABS-MR-efficacy variable correlations for German samples.

Group	ABS-MR Scale Level Correlations						
	1	2	3	4	5	6	Total
148 Special Teachers	-.07	.06	.14	.05	.21*	.02	.13
74 Regular Teachers	.14	.19	.09	.14	.20	.25*	.27*
144 Parents of Retarded	.09	.02	.10	-.06	.09	.12	.10
83 Manager-Executives	.07	.01	.17	.12	-.08	.16	.14
70 Parents of Non-Retarded	-.10	-.06	.07	.11	-.29*	.13	-.03
522 Total Sample	.11*	.09*	.06	.02	.06	.08	.13*

*P.<.05.

Table 9 reveals no consistent and readily apparent pattern either in support of or in contradiction to the hypothesis for the various groups on the different levels of the ABS-MR. The small but statistically significant positive correlations for the total sample on levels 1 and 2 and the total ABS-MR are in direct support of the hypothesis, however, and it is concluded that Hypothesis 1 is partially, if weakly, supported by the data.

Relating Attitudes and Knowledge

H-2: Persons who score high in knowledge about mental retardation will score high in positive attitudes toward the mentally retarded.

Hypothesis 2 was tested by correlating the ABS-MR with the Knowledge About Mental Retardation Scale described in Chapter IV. Table 10 presents these correlations for the various German samples and the total sample.

Examination of Table 10 discloses that a number of correlations reach significance at the .05 level; all are negative correlations, however, and in direct contradiction to the hypothesis which predicts a positive relationship between attitudes and knowledge. Seven of the 11 positive correlations appearing in Table 10 are found in the row for the special educators, although none of these reach significance. In fact, with the exception of the special teacher group, at least one significant negative

TABLE 10.--ABS-MR-knowledge variable correlations for German samples.

Group	ABS-MR Scale Level Correlations						
	1	2	3	4	5	6	Total
148 Special Teachers	.11	.11	.04	.09	.07	.07	.15
73 Regular Teachers	-.05	.02	-.21	-.21	-.20	-.31*	-.26*
138 Parents of Retarded	-.03	-.08	-.15	-.06	-.16*	-.07	-.17*
80 Manager-Executives	.18	.19	-.17	-.11	-.09	-.26*	-.08
69 Parents of Non-Retarded	-.42*	-.24*	-.12	-.18	-.17	.08	-.30*
511 Total Sample	-.15*	-.06	-.05	-.06	-.11*	-.09*	-.16*

*P.<.05.

correlation appears in the table for each of the other sample groups and significant negative correlations appear on levels 1, 5, and 6 (stereotype, feelings, and behavior) as well as the total ABS-MR for the entire sample.

Table 10, in short, suggests that increasing knowledge about mental retardation is certainly not a predictor of positive attitudes toward the retarded and, if anything, appears in fact to be a predictor of negative attitudes for the most part. At any rate, the results are in clear contradiction to Hypothesis 2 and it is concluded that this hypothesis is not supported.

Relating Attitudes and Contact

H-3: The more frequent the contact with mentally retarded persons the higher will be the intensity scores on the ABS-MR, regardless of the direction (positiveness or negativeness) of attitude.

Hypothesis 3 was tested by separating content and intensity responses and correlating item 105 in the questionnaire section, which deals with the frequency of contact with mentally retarded persons, and the intensity variables of the ABS-MR. Table 11 contains these correlations along with separate correlations between the contact variable and ABS-MR content scores and combined content-intensity scores.

TABLE 11.--ABS-MR intensity, content, and combined content and intensity correlations with amount of contact with mentally retarded persons for German samples.

Group	Variable	ABS-MR Scale Level Correlations						
		1	2	3	4	5	6	Total
147 Special Teachers	Intensity	.08	-.05	-.06	-.10	.01	.00	-.02
	Content	-.07	.01	-.10	-.03	-.03	.02	-.06
	Combined	-.12	-.01	-.10	-.05	.02	.01	-.08
74 Regular Teachers	Intensity	.11	.21	.26*	.17	.21	.11	.25*
	Content	.15	-.17	.04	.20	.01	.13	.11
	Combined	.09	-.26*	.13	.20	.04	.14	.10
137 Parents of Retarded	Intensity	.03	-.02	-.10	-.10	-.33*	.27*	-.06
	Content	.00	-.05	.00	-.08	.02	.29*	.04
	Combined	-.02	-.08	-.03	-.09	-.10	.30*	-.03
83 Manager-Executives	Intensity	-.17	-.03	.08	.06	-.07	.05	-.03
	Content	.01	.02	-.02	-.07	.25*	.05	.06
	Combined	.04	.05	.01	-.07	.19	.04	.07
71 Parents of Non-Retarded	Intensity	.24*	.11	.09	-.07	.10	.10	.12
	Content	.16	.12	.21	.20	.20	.07	.26*
	Combined	.19	.17	.19	.21	.21	.07	.28*
516 Total Sample	Intensity	.13*	-.03	.14*	.20*	.17*	.31*	.22*
	Content	-.41*	-.20*	.17*	.21*	.10*	.14*	.00
	Combined	-.43*	-.21*	.19*	.23*	.18*	.15*	.03

*P.<.05.

Turning to the intensity correlations in Table 11, it can be seen that frequency of contact is significantly positively related to ABS-MR intensity on all levels, including the total score, with the exception of level 2 (normative) for the total sample in direct support of the hypothesis.

Three other significantly positive intensity correlations occur in Table 11 in a rather random fashion for the regular teachers and the parents of non-retarded children but the most interesting finding seems to be the significant negative intensity correlation of -.33 on the feeling level 5 for the parents of retarded children. Apparently, the more frequent the contact with the mentally retarded, and hence presumably the more frequent their contact with and the older their retarded children, the less sure these parents were of their feelings for the retarded. Interpretation of the positive correlation for this group on level 6 is not straightforward in relation to level 5, however, because it will be recalled that "intensity" on this level measures the degree of pleasantness or unpleasantness of behavioral interactions with the retarded.[2] Apparently the parents of retarded, while

[2]This problem of incomparability of level 6 intensity to the intensity of the other ABS-MR intensity scores was eliminated in all but one other analysis (H-4) by combining content and intensity scores according to the procedure described in Chapter III and Appendix B.

seemingly more unsure of the feelings about their children the older the children were, generally found their behavioral interactions with their children agreeable--which may suggest some ambivalence in this regard for these parents.

Although not in direct test of any hypothesis, but in view of the confusion in the literature (see Chapter II) about the relationship between contact with the retarded and attitudes toward this group, it was decided to correlate the amount-of-contact variable with the ABS-MR content items and these correlations are included in Table 11.

The content correlations with the contact variable for the total sample possibly suggest a clue to previous inconsistent findings with the contact variable. It will be noted that while there is a .00 correlation between amount of contact and the total ABS-MR content score, the correlations on each and every individual scale level reach significance--in opposite directions, however, for on levels 1 and 2 (stereotypic and normative) the correlations are significantly negative while on the rest of the scales they are all significantly positive. These opposite-direction correlations then cancel each other out so that the end result is the .00 correlation on the total ABS-MR content items. It will be recalled from Figures 3-6 in Chapter III that the Referent (Facet A) shifts from Others (a_1) to Self (a_2) from levels 2 to 3 in the ABS-MR,

suggesting that these subjects were attributing more negative attitudes to others and more positive attitudes to themselves toward the retarded the more frequent their contact with the retarded.

As a further and final digression, the inclusion of the combined content-intensity correlations with the amount-of-contact variable in Table 11 provides an opportunity to evaluate further the influence of combining content and intensity statements into one score. It will be noted that the combined content-intensity correlations in Table 11 essentially replicate the content correlations with two exceptions: (a) the negative content correlation on level 2 for the regular teachers is apparently strengthened enough by the positive (but not significant) intensity correlation on this level to reach significance in the combined correlation, and (b) the reverse occurs on level 5 for the manager-executives where the non-significant negative intensity correlation apparently weakens the significant positive content correlation on this level enough so that the combined correlation falls below the .05 level of significance.

Examination of the content and combined content-intensity figures for the total sample reveals significant correlations in the same direction on levels 1-6 with the absolute values of the coefficients being slightly elevated in each case as a result of combining content and

intensity. Generally, these findings seem to provide support for the rationale presented in Chapter III for combining content and intensity into one score for each item, i.e., that this procedure would sharpen and clarify relationships where they existed by enhancing the discriminative ability of the ABS-MR items.

Returning once again to Hypothesis 3, the intensity data presented in Table 11, showing significant positive correlations between amount of contact with the mentally retarded and all but level 2 of the ABS-MR intensity scores for the total sample, suggest rather direct and strong support for this hypothesis.

H-4: The more frequent the contact with other disability groups the higher will be the intensity scores on the ABS-MR regardless of the direction of attitude.

Hypothesis 4 was tested by correlating item 100 in the personal questionnaire with the intensity scores on the ABS-MR. Item 100 measures the amount of contact the subject has had with the various disability groups listed in item 98 in the same questionnaire. Unfortunately, however, "mental retardation" was also inadvertently listed as one of the groups of disabling conditions in this question which determined with which group of handicapped the subject had had the most contact. Since item 100 measured the amount of contact with the disability group checked in item 98, it became necessary to eliminate those subjects

from analysis who had chosen the "mental retardation" alternative to item 98. As it turned out, this eliminated so many subjects from the various samples that it became possible to test this hypothesis only for the total remaining sample which was reduced to 156. The correlations between amount of contact with non-retarded disabled people and the ABS-MR intensity items for each level are therefore presented for this reduced total sample in Table 12.

Table 12 reveals significant positive correlations between amount of contact with other disability groups and ABS-MR intensity scores on levels 5 and 6 (feelings and behavior) as well as on the total ABS-MR intensity score. The difficulty in interpreting level 6 "intensity" statements has already been discussed in connection with Hypothesis 3 and will not be repeated here. How much of the total ABS-MR intensity correlations with contact with other disability groups is accounted for by the .33 correlation between these two variables on level 6 is problematical, however, and the only direct support of Hypothesis 4 is found in the contact correlation with level 5. In view of all of the qualifications and questions raised in the testing of this hypothesis, perhaps the most reasonable conclusion would be that the data presented do not permit a reasonable test of Hypothesis 4.

TABLE 12.--ABS-MR intensity score--amount-of-contact with non-retarded disabled persons correlations for total German sample.

Group	ABS-MR Intensity Correlations						
	1	2	3	4	5	6	Total
156 Total Sample	-.11	-.04	.14	.13	.19*	.33*	.18*

*P.<.05.

H-5: High frequency of contact with mentally retarded persons will be associated with favorable attitudes toward the mentally retarded if high frequency is concurrent with (a) alternative rewarding opportunities, (b) ease of avoidance of the contact, and (c) enjoyment of the contact.

As was the case with Hypothesis 4, a great deal of difficulty was encountered in testing this hypothesis because of errors in the construction of the personal questionnaire. It had originally been hoped that a multiple correlation analysis could have been accomplished with (a) amount of contact, (b) alternative rewarding opportunities, (c) ease of avoidance, and (d) enjoyment of the contact as partial correlates. Because of instrumentation error, however, (b) and (c) referred to the "other" disability groups in questionnaire item 98, while (a) and (d) referred to amount and enjoyment of contact with mentally-retarded-only, measured by items 105 and 106. Because of various computer programming difficulties arising from this error, and because 156 subjects would have to be eliminated in calculating two of the partial correlates (the number appearing in Table 12 who chose alternatives other than "mental retardation" to questionnaire item 98), attempts at the originally desired multiple correlation analysis of this hypothesis proved impossible and were finally abandoned. Instead, it was decided to test only

the "amount" and "enjoyment" aspects of the hypothesis in two straightforward correlational analyses. Therefore, ABS-MR correlations with enjoyment of contact with the mentally retarded are presented in Table 13 along with the amount of contact correlations repeated from Table 11 for the reader's convenience.

The amount and enjoyment correlations with the ABS-MR presented in Table 13 for the total sample are strikingly similar, with significant negative correlations appearing on levels 1 and 2 and significant positive correlations appearing on levels 3-6 for both variables. The somewhat greater magnitude of the positive correlations with the enjoyment variable for the total sample on levels 3-6 results in a significant positive correlation with the ABS-MR total score for the variable whereas, as was previously pointed out, the positive correlations on levels 3-6 are effectively cancelled out by the negative correlations on levels 1 and 2 in the total ABS-MR--amount-of-contact correlation for the total sample. In general, it would appear that both amount of contact with mentally retarded persons and enjoyment of that contact are related to the subjects attributing negative attitudes toward the retarded to others and positive attitudes to themselves since, as was previously discussed in reference to Hypothesis 3, the "referent" changes from "others" to "self" from level 2 to level 3.

TABLE 13.--ABS-MR correlations with amount and enjoyment of contact with mentally retarded persons for German samples.

Group	Contact Variable	ABS-MR Scale Level Correlations						
		1	2	3	4	5	6	Total
148 Special Teachers	Amount	-.12	-.01	-.10	-.05	.02	.01	-.08
	Enjoyment	-.09	-.01	.12	.02	.17*	.14	.11
74 Regular Teachers	Amount	.09	-.26*	.13	.20	.04	.14	.10
	Enjoyment	.23*	-.01	.18	.12	.26*	.41*	.31*
137 Parents of Retarded	Amount	-.02	-.08	-.03	-.09	-.10	.30*	-.03
	Enjoyment	-.10	-.14	-.04	.13	-.05	.20*	-.01
83 Manager-Executives	Amount	.04	.05	.01	-.07	.19	.04	.07
	Enjoyment	.04	.12	.11	.16	.13	.61*	.31*
70 Parents of Non-Retarded	Amount	.19	.17	.19	.21	.21	.07	.28*
	Enjoyment	.01	.10	.20	.11	-.02	.21	.15
515 Total Sample	Amount	-.43*	-.21*	.19*	.23*	.18*	.15*	.03
	Enjoyment	-.31*	-.20*	.19*	.37*	.26*	.48*	.25*

*$P < .05$.

Aside from the figures for the total sample, enjoyment of contact would seem to be a more powerful predictor of attitudes than amount of contact for the various groups, with eight ABS-MR correlations with enjoyment-of-contact reaching significance among the individual samples as opposed to four for amount-of-contact. That this finding may be of some importance is suggested by a comparison on the behavioral level 6 for the manager-executive group whose attitudes toward the retarded are considered crucial in determining whether or not the retarded are employed. Table 13 reveals an insignificant (.04) relationship for this group between amount of contact and attitudes toward their behavioral interactions with the retarded as opposed to a statistically significant .61 correlation between enjoyment of contact and level 6.

In summary, instrumentation errors prevented a full test of Hypothesis 5 but it was found that two of the four variables originally to be tested, amount and enjoyment of contact with the retarded, were positively related to attitudes toward the retarded for the total sample on levels 3-6 of the ABS-MR in direct support of the hypothesis. Conversely, amount and enjoyment of contact were found to be negatively related to attitudes on ABS-MR levels 1 and 2 for the total sample. Therefore, it is concluded that Hypothesis 5 is only partially supported by the data.

Relating Attitudes
and Religiosity

H-6: Persons who score high on stated importance of religion will score low on positive attitudes toward the mentally retarded.

Hypothesis 6 was tested by correlating the ABS-MR scale with responses to item 86 in the questionnaire section of the instrument which asks the subject to rate the importance to him of his religion in his daily life. Table 14 shows the resulting correlations for the various sample groups between the ABS-MR and this variable.

Hypothesis 6 predicts a negative relationship between religious importance and the ABS-MR and it can be seen from Table 14 that only one such correlation appears which reaches the .05 level of significance: the -.22 correlation on level 5 for the manager-executive group. Several other correlations in this table reach significance but all are of a positive nature, including small but statistically significant positive correlations for the total sample on levels 4 and 6 as well as the ABS-MR total. The data in Table 14 generally suggest a weak positive relationship between the ABS-MR and the religious importance variable in direct contradiction to Hypothesis 6; it is therefore concluded that Hypothesis 6 is not supported.

TABLE 14.--ABS-MR-stated importance of religion correlations for German samples.

Group	ABS-MR Scale Level Correlations						
	1	2	3	4	5	6	Total
148 Special Teachers	-.04	.03	.08	.06	.11	.19*	.14
74 Regular Teachers	-.20	.06	-.06	-.05	-.14	-.11	-.13
144 Parents of Retarded	.05	.10	.10	.02	.04	-.08	.08
83 Manager-Executives	-.05	-.08	.11	.09	-.22*	.15	.00
70 Parents of Non-Retarded	.03	.23*	.16	.13	.02	-.22	.12
522 Total Sample	-.02	.06	.08	.09*	.04	.10*	.10*

*P.<.05.

H-7: Persons who score high on stated adherence to religion will score low on positive attitudes toward the mentally retarded.

Hypothesis 7 was tested by correlating the ABS-MR with the extent to which the subjects observed the rules and regulations of their religion measured by item 96 in the questionnaire. Table 15 presents these correlations for the German samples.

Examination of Table 15 reveals that only three correlations between the ABS-MR and the religious adherence variable reach significance and that all are positive and occur on the behavioral level 6. That all appear on level 6 suggests that this may be more than the chance occurrence of two or three significant correlations to be expected in a table of 42 coefficients. On the other hand, why such a relationship should emerge with only three of the five groups is unclear. What is clear, however, is that Hypothesis 7 which predicts a negative relationship between religious adherence and the ABS-MR, similar to the religious importance hypothesis (H-6), is not supported by the data in Table 15.

Relating Attitudes and Demographic Variables

H-8: Amount of education will be positively related to favorable attitudes toward the mentally retarded.

TABLE 15.--ABS-MR-stated adherence to religion correlations for German samples.

Group	ABS-MR Scale Level Correlations						
	1	2	3	4	5	6	Total
146 Special Teachers	-.05	-.06	.08	.08	.11	.22*	.12
74 Regular Teachers	-.15	-.14	.04	.06	-.11	.04	-.06
144 Parents of Retarded	-.01	-.02	-.01	.05	.02	.00	.01
83 Manager-Executives	-.16	-.04	.10	.04	.01	.22*	.05
70 Parents of Non-Retarded	.02	.02	.02	.14	.00	.23*	.11
520 Total Sample	.01	-.01	.01	.01	-.03	.04	.01

*P.<.05.

Hypothesis 8 was tested by correlating the ABS-MR with responses to item 87 in the questionnaire which asked the subject to report his highest level of education. The resultant correlations for the five German sample groups and the total sample are given in Table 16.

Examination of the figures in Table 16 suggests that education is related only to the first four levels of the ABS-MR. Looking at the figures for the total sample once again, it can be seen that the relationship between education and the first two levels of the ABS-MR (opinions on how others compare and evaluate the mentally retarded) is a negative one, as it was with the amount-of-contact variable. On levels 3 and 4 (opinions on how others 'should' and how the subject himself 'would' behave toward the retarded), significant positive correlations appear for the total sample, while no correlations reach a statistically significant level in columns 5 (feelings) and 6 (behavior) of this table. The significant negative correlation for the total sample on the total ABS-MR is a function of the greater magnitude of the negative correlations, as opposed to positive correlations, that appear on the individual scale levels for the total sample and it is becoming more and more clear that the total ABS-MR scores are relatively meaningless as it becomes more and more clear that this instrument is indeed measuring different dimensions of attitudes.

TABLE 16.--ABS-MR-amount of education correlations for German samples.

Group	ABS-MR Scale Level Correlations						
	1	2	3	4	5	6	Total
147 Special Teachers	-.03	-.03	.26*	.11	-.11	.09	.11
74 Regular Teachers	-.01	-.13	-.20	-.03	-.05	.07	-.09
143 Parents of Retarded	-.37*	-.07	.04	-.04	-.07	.07	-.15
83 Manager-Executives[1]	--	--	--	--	--	--	--
69 Parents of Non-Retarded	-.03	-.15	-.08	-.08	-.17	.02	-.14
518 Total Sample	-.58*	-.26*	.24*	.11*	-.07	-.02	-.18*

*P.<.05.

[1]Members of this group all checked the same alternative for amount of education.

Once again it would appear that the sharpest differentiation on the scale occurs between levels 2 and 3 where the "referent" shifts from "others" to "self." The two significant correlations for the individual samples appear in columns 1 and 3 and are in the same direction as those for the total sample. The appearance of greater absolute values for the correlation coefficients for the total sample than for the individual samples suggests that the education variable is relatively homogeneous within the sample groups, a contention further supported by the fact that the manager-executive group all checked the same alternative for amount of education.

All in all, the data in Table 16 suggest that an increasing amount of education is related to a tendency to attribute poor attitudes to others on the stereotypic and normative levels 1 and 2, and positive attitudes to the self on the moral evaluation and hypothetical behavioral levels 3 and 4 for the total German sample. Education does not appear related to the affective and behavioral levels 5 and 6 and it is concluded that Hypothesis 8 is only partially supported.

H-9: Age will be positively related to favorable attitudes toward the mentally retarded.

Hypothesis 9 was tested by correlating the ABS-MR with the respondents ages determined by item 82 in the

questionnaire section of the instrument. These correlations appear in Table 17 for the various sample groups.

Examination of the first three columns in Table 17 reveals that a total of three correlations reach significance and that all are in a negative direction: levels 2 and 3 for the parents of retarded and level 3 for the regular teacher group. The negative correlations on level 3 (moral evaluation) suggest that increasing age in these two groups is related to increasingly negative opinions with regard to how others should judge and behave toward the retarded. For the parents of retarded, this finding is in conjunction with a negative correlation on level 2 which suggests that increasing age in this group is related to increasingly negative opinions as to how others actually do judge and behave toward the retarded. Increasing age then apparently brings about more acceptance and condoning of negative opinions of others in these parents, which may in turn mean that they become more resigned to reality with age. On the other hand, why increasing age should be negatively related to opinions on how other people should behave toward the retarded in the regular teachers is unclear in view of the positive correlations appearing on the affective and behavior levels for this group.

Beginning with level 4, the remaining significant scale level correlations are all positive. Only the

TABLE 17.--ABS-MR-age correlations for German samples.

Group	ABS-MR Scale Level Correlations						
	1	2	3	4	5	6	Total
148 Special Teachers	-.04	.03	.03	-.09	.21*	.22*	.10
74 Regular Teachers	.01	.20	-.24*	.13	.41*	.44*	.28*
144 Parents of Retarded	-.14	-.21*	-.17*	-.02	-.10	.15	-.16*
83 Manager-Executives	-.13	-.14	-.07	.06	.30*	.02	.03
70 Parents of Non-Retarded	.03	-.01	.07	.00	-.10	.21	.04
521 Total Sample	-.03	-.07	-.07	.13*	.21*	.37*	.16*

*P.<.05.

coefficient for the total sample reaches significance on level 4 (hypothetical behavior) while significant positive correlations appear on levels 5 and 6 (feelings and behavior) for both teacher groups and the total sample and on level 5 for the manager-executives. Age obviously has the most relationship to levels 5 and 6 of any of the variables examined so far for the two teacher groups.

The ABS-MR total score correlations are relatively meaningless, as previously pointed out, because they are a function of the differing magnitudes and directions of the individual scale level correlations between-and-within the various sample groups and are hence incomparable. Perhaps the figures for the total sample are most illustrative of the manner in which the age variable is operating. In direct contrast to the education variable (Table 16), where the strongest relationship appeared on the first three levels, the strongest relationships between age and the ABS-MR appear on the affective and behavioral levels 5 and 6. In both Table 16 and 17, small but statistically significant positive correlations appear on level 4 for the total sample. Thus, where education was related to the ABS-MR only at the more abstract and impersonal levels, age is related primarily at the more concrete and personal affective and behavioral levels. Seven of the 12 correlation coefficients in columns 5 and 6 reach significance in a positive direction and it is concluded that Hypothesis 1 is supported only on the affective and behavioral levels.

H-10: Women will score higher on positive attitudes toward the mentally retarded than will men.

The computer analysis provided means and standard deviations according to sex only for the total sample; thus it was not possible to evaluate any possible ABS-MR differences according to sex within the individual sample groups. A t test was calculated between total sample male and female means on each of the six levels and total scores of the ABS-MR, however, and these results appear in Table 18.

TABLE 18.--ABS-MR means and t's for total sample of females versus total sample of males.

ABS-MR Scale Levels	235 Females	284 Males	t
1. Stereotype	69.37	67.19	1.10
2. Norm	76.80	75.61	.65
3. Moral	129.87	129.45	.25
4. Hypo. Behavior	116.50	115.10	.57
5. Feelings	101.49	102.72	.69
6. Behavior	79.53	80.39	.51
ABS-MR Total Score	573.57	570.44	.50

*P. < .05.

Table 18 indicates that although there were small male-female differences on levels 1-4 and the total scores in the predicted direction and on levels 5 and 6 opposite to the predicted direction, none of these differences is statistically significant and Hypothesis 10 is clearly not supported by this data. These results further suggest that adjustment for sex differences in subsequent analysis of variance statistics for the total sample will be minor and of relatively little importance.

Relating Attitudes and Change Orientation

H-11: Persons who score high on change orientation will score high on positive attitudes toward the mentally retarded.

Hypothesis 11 was tested by a multiple correlation program which produced a multiple correlation between responses to the six change orientation questions described in Chapter III and each of the six levels and total score of the ABS-MR for each of the German sample groups. In addition, this program produced a partial correlation between each change orientation variable and the various ABS-MR levels with the remaining change orientation variables "partialled out" or held constant. The change orientation questions dealt with self change (item in the questionnaire), child rearing (item 89), birth control (item 90), automation (item 91), political

leadership (item 92), and rule adherence (item 97). The results of the multiple regression analysis are presented in Table 19.

Viewing the data in Table 19, it is apparent that the magnitude of the partial correlations is generally low although the number of these coefficients reaching significance is beyond the .05 chance level of occurrence in each of the matrices. Secondly, in almost every row and column of the various matrices there appear both positive and negative partial correlations. The appearance of both positive and negative correlations in the columns suggests that the different questions are not measuring the same pure theoretic variable--change orientation--on each ABS-MR level, while the appearance of both positive and negative coefficients in the rows suggests that the same change orientation question is not being related to the same pure theoretic variable--attitudes toward mental retardation--on each of the Abs-MR levels. In short, it appears from Table 19 that one multidimensional variable, change orientation, is being related to another multidimensional variable, attitudes toward mental retardation, in a manner which is not consistent for each of the sample groups.

In addition, reference to the product-moment correlations on which the multiple correlations are based revealed that most of the latter are derived from both

TABLE 19.--ABS-MR-change orientation partial and multiple correlations for German samples.

Change Orientation	ABS-MR Scale Level Correlations													
Variables	1	2	3	4	5	6	Total	1	2	3	4	5	6	Total
	148 Special Teachers							74 Regular Teachers						
Self Change	-.15	-.07	.10*	.19*	.16	.12	.16	-.02	-.07	.06	.11	.28*	.09	.14
Child Rearing	.02	-.08	-.05	-.08	-.17*	-.07	-.14	.02	.06	.01	-.20	.07	-.18	-.07
Birth Control	-.03	.07	.02	-.04	.18*	.09	.08	-.13	-.12	-.10	-.22	-.23*	-.02	-.24*
Automation	-.08	.01	.00	-.13	.11	-.01	-.04	.10	.08	.19	.07	.03	.09	.14
Political Leadership	-.04	-.14	-.01	.03	.11	.08	.01	-.08	-.13	-.02	.12	-.05	.07	-.02
Rule Adherence	-.08	.01	.03	.05	.11	.14	.09	.13	.10	.00	-.04	.09	-.05	.08
Multiple Correlation	.25*	.19*	.22*	.21*	.38*	.25*	.24*	.22	.28*	.23	.35*	.35*	.26*	.33*
	144 Parents of Retarded							83 Manager-Executives						
Self Change	.00	-.03	-.03	.00	-.22*	.07	-.07	.01	.22*	.20	.27*	.05	-.04	.25*
Child Rearing	-.06	.08	.22*	.22*	-.04	.01	.14	.00	.23*	.00	-.14	-.06	.01	-.01
Birth Control	.00	-.02	.22*	-.07	-.03	-.15	-.02	-.26*	-.23*	.01	-.21	.00	-.11	-.25*
Automation	-.11	-.09	-.03	.01	.08	.15	-.01	.01	.00	-.01	-.08	.01	.05	-.02
Political Leadership	.06	.00	-.05	.08	-.02	.00	.03	-.07	-.12	-.02	.03	-.17	-.01	-.11
Rule Adherence	-.16	-.13	-.08	-.05	-.15	.01	-.18*	.10	.12	-.09	-.07	.06	-.06	.01
Multiple Correlation	.24*	.18*	.33*	.24*	.28*	.20*	.22*	.28*	.40*	.23*	.39*	.18	.14	.37*
	70 Parents of Non-Retarded							520 Total Sample						
Self Change	-.17	.11	.07	-.02	-.24*	-.04	-.07	.13*	.06	.04	.01	-.01	.00	.07
Child Rearing	-.04	-.21	-.12	.02	-.01	.11	-.07	-.08	-.03	.12*	.13*	.05	.16*	.11*
Birth Control	.13	.17	.18	.03	-.06	-.02	.12	-.02	.01	.05	-.12	-.04	-.08	-.07
Automation	.06	.04	.07	.30*	.01	.00	.15	.01	.02	.03	.03	.05	.05	.05
Political Leadership	.03	.14	.30*	.27*	.18	-.01	.25*	.08	.02	-.03	.04	.00	.00	.04
Rule Adherence	.03	-.23	-.10	.10	.07	.27*	.02	-.21*	-.12*	.03	.02	-.06	-.01	-.11*
Multiple Correlation	.25*	.39*	.44*	.43*	.27*	.29*	.35*	.27*	.15*	.17*	.17*	.10*	.18*	.20*

*P.<.05.

positive and negative product-moment correlations. It is not surprising, therefore, that nearly all of these multiple correlations reach the .05 level of significance. Hagood and Price (1952) have pointed out:

> The coefficient of multiple correlation does not have any direction since the concept of direction is not applicable to association between one variable and several others considered simultaneously. The coefficient of multiple correlation is often a combined measure of positive and negative relationships (p. 508).

Thus, while there is obviously a relationship within the various samples and the total sample between the change orientation variables and the ABS-MR, in the sense that a significant amount of ABS-MR variance can be accounted for by the multiple correlation coefficients, the relationship is not a straightforward one as predicted by Hypothesis 11. It is therefore concluded that the data in Table 19 do not support this hypothesis.

Relating Attitudes to Opinions on Educational Aid and Planning

H-12: Agreement with government aid to education will be positively related to favorable attitudes toward the mentally retarded.

Hypothesis 12 was tested by correlating the ABS-MR with items 93 and 94 of the personal questionnaire which deal with opinions regarding increased federal and local government financial support of education respectively. These correlations are reported for the German samples in Table 20.

for German samples.

Group	Variables	ABS-MR Scale Level Correlations 1	2	3	4	5	6	Total
148 Special Teachers	Local Aid	-.31*	-.06	.17*	.16*	.28*	.19*	.16*
	Federal Aid	-.21*	-.08	.21*	.14	.22*	.14	.15
74 Regular Teachers	Local Aid	.02	.04	.04	.05	.25*	.04	.12
	Federal Aid	-.01	-.02	.05	.11	.25*	.11	.14
144 Parents of Retarded	Local Aid	-.04	-.10	.07	.10	-.14	.00	-.03
	Federal Aid	-.01	-.03	.04	.04	-.22*	.08	-.03
83 Manager-Executives	Local Aid	-.12	.04	.22*	.21	.12	.07	.19
	Federal Aid	.11	.22*	.22*	.31*	.06	.10	.34*
70 Parents of Non-Retarded	Local Aid	.02	.27*	.23	.07	.06	.07	.18
	Federal Aid	-.17	.16	.16	.11	-.20	-.05	.02
521 Total Sample	Local Aid	-.16*	-.03	.17*	.13*	.05	.05	.06
	Federal Aid	-.15*	-.03	.16*	.13*	-.04	.06	.05

*P.<.05.

Table 20 reveals that the education variables bear the strongest relationship to ABS-MR attitudes in the special educator group where 8 of the 12 scale level correlations reach significance. A number of other significant correlations are scattered throughout Table 20 but in none of the other groups does a pattern emerge as clearly as with the special teachers where negative correlations are found on levels 1 and 2 (although the latter were not significant) and positive correlations are found on the rest of the scales.

Turning to the figures for the total sample, it is noted that the direction and magnitude of the correlation coefficients for the two aid variables are in close agreement. Judging from the figures for the total sample, it would appear that the aid-to-education variables are related to ABS-MR attitudes primarily at the more abstract and impersonal levels: negatively on the stereotypic level 1 and positively on the moral and hypothetical behavior levels 3 and 4. The negative to positive change in correlational sign from levels 2 to 3 has been noted previously in conjunction with other hypotheses and appears once again in the figures for the total sample in Table 20.

In summary, Hypothesis 12 is generally supported only within the special educator group and is partially supported for the total sample on two of the six ABS-MR scales.

H-13: Agreement with centralized government planning of education will be positively related to favorable attitudes toward the mentally retarded.

Hypothesis 13 was tested by correlating the ABS-MR with responses to item 95 of the personal questionnaire. This item measures the extent to which education should be planned by governmental agencies, on a continuum ranging from planning directed primarily by the church to planning directed primarily by the federal government. The resulting correlations are displayed for the German samples in Table 21.

As may be seen in Table 21, only three correlations reach the .05 level of significance: a negative correlation on level 4 (hypothetical behavior) for the regular teachers and positive correlations on levels 3 (moral evaluative) and 4 for the parents of retarded. While a rationale can be provided for the positive correlations, i.e., agreement with centralized government planning is consistent with a liberal and hence presumably more flexible and accepting attitude toward deviants, the negative correlation for the regular teachers is not self explanatory and is perhaps a chance phenomenon.

The figures for the total group show once again the previously seen pattern of a shift from negative to positive correlations from level 2 to level 3, with significant negative correlations once again appearing on

TABLE 21.--ABS-MR-agreement with centralized planning of education correlations for German samples.

Group	ABS-MR Scale Level Correlations						
	1	2	3	4	5	6	Total
148 Special Teachers	-.02	-.09	-.02	-.08	-.07	-.02	-.09
74 Regular Teachers	.00	.05	-.01	-.24*	-.02	-.19	-.13
143 Parents of Retarded	-.16	.00	.23*	.21*	-.10	-.01	.06
82 Manager-Executives	.02	.16	.00	-.18	-.04	-.03	-.04
68 Parents of Non-Retarded	.03	-.11	-.02	.10	.01	.13	.04
518 Total Sample	-.17*	-.09*	.12*	.06	-.06	.01	-.04

*P.<.05.

levels 1 and 2 while a significant positive correlation appears only on level 3 for the total sample in this case. The pattern of significant negative correlations appearing on one or both of the first two levels of the ABS-MR and significant positive correlations on one or more levels beyond level 2 has been previously noted in conjunction with the contact-with-retarded-persons variables (H-5), the amount-of-education variable (H-8), and the just discussed aid-to-education variable (H-12). In each of these cases, as in the present case of the planning-of-education variable, increasing "amounts" of the independent variable has been associated with attributing negative attitudes toward the retarded to others and positive attitudes to oneself on one or more of the ABS-MR scale levels.

Returning to Hypothesis 13, the one significant positive correlation appearing for the total sample in Table 21 is interpreted as providing meager support for the predicted positive relationship between agreement with centralized government planning of education and the ABS-MR. It is therefore concluded that Hypothesis 13 is not supported.

Relating Attitudes and Group Membership

H-14: The groups will assume the following order with respect to favorable attitudes toward the mentally retarded: Teachers of the Mentally Retarded>Parents of the Mentally Retarded>Regular Teachers>Manager-Executives.

H-16: Parents of Normal Children will have less positive attitudes than any other group.

It may be recalled from Chapter IV that the original research proposal did not anticipate the inclusion of a sample of parents of non-retarded children in the study, hence the redundancy of two hypotheses where one would suffice. A revised, ex post facto hypothesis incorporating the predictions of Hypotheses 14 and 16 would read as follows: The groups will assume the following order with respect to favorable attitudes toward the mentally retarded: Teachers of the Mentally Retarded>Parents of the Mentally Retarded>Regular Teachers>Manager-Executives>Parents of Non-Retarded Children.

Hypotheses 14 and 16, or more conveniently, the combined Hypothesis 14-16, was tested through a one way analysis of variance procedure for each of the samples on each of the ABS-MR scale levels and totals using means adjusted for sample size and sex differences. The multiple means test described in Chapter IV was also applied to the data and each mean was tested against every other mean in an F test producing results equivalent to a two tailed t test. The results of this analysis appear in Table 22 where the sample groups are listed in the hypothesized order of differences for the reader's convenience.

It will be noted at the outset that the groups assumed the hypothesized order only on ABS-MR level 4--

TABLE 22.--ABS-MR adjusted means,[1] F's, and multiple means test results for German samples.

ABS-MR Scale Levels	148 ST[2]	146 PR[3]	74 RT[4]	84 ME[5]	70 PN[6]	F	Multiple Means Test*
1. Stereotype	49.97	77.64	63.57	70.36	89.67	73.37*	PN>ME, PN>RT, PN>ST; PR>ME, PR>RT, PR>ST; ME>RT, ME>ST, RT>ST
2. Norm	69.19	77.60	72.95	78.03	89.99	14.10*	PN>PR, PN>RT, PN>ST; ME>ST; PR>ST
3. Moral	135.39	127.39	133.75	126.34	121.55	9.20*	ST>PR, ST>ME, ST>PN; RT>PR, RT>ME, RT>PN
4. Hypo. Behavior	127.31	124.34	108.34	103.83	95.66	30.16*	ST>RT, ST>ME, ST>PN; PR>RT, PR>ME, PR>PN
5. Feelings	108.88	107.57	91.47	89.80	102.77	23.00*	ST>PN, ST>RT, ST>ME; PR>PN, PR>RT, PR>ME; PN>RT, PN>ME
6. Behavior	83.39	93.10	77.18	63.84	67.39	58.66*	PR>ST, PR>RT, PR>PN, PR>ME; ST>RT, ST>PN, ST>ME; RT>ME; PN>ME
ABS-MR Total Score	574.13	607.65	547.26	532.20	567.03	20.34*	PR>ST, PR>PN, PR>RT, PR>ME; ST>RT, ST>ME; PN>RT, PN>ME

[1]Adjusted for sex and sample size.

[2]Special Education Teachers

[3]Parents of Retarded

[4]Regular Teachers

[5]Manager-Executives

[6]Parents of Non-Retarded

*P.<.05.

hypothetical behavior. Even here, however, the differences between all of the means were not significant. There were no statistically significant differences between the special teachers and the parents of retarded on the one hand, or between the regular teachers, the manager-executives and the parents of non-retarded on the other, with both the special teachers and parents of retarded scoring significantly higher than all of the latter groups on this scale level.

It has previously been pointed out in connection with the testing of several other hypotheses that a definite change of direction seems to occur in some cases from level 2 to level 3 where the "referent"--the person to whom the opinion or behavior is attributed--shifts from "others" to "self." This phenomenon is once again demonstrated rather clearly when the scores of the special education teachers and the parents of non-retarded children are compared on the first four ABS-MR levels. On levels 1 and 2 the parents of normals attributed the most favorable attitudes to others while the special educators scored lowest on these two levels. On levels 3 and 4 just the reverse occurs, with the special teachers attributing the most favorable attitudes to themselves while the parents of non-retarded children score lowest of all groups on these two levels. The special educators also scored consistently (and significantly) higher on levels 5 and 6

than did the parents of normals although the differences in rank order of scores for these two groups was not as striking on these two levels as on the first four.

The parents of retarded children were consistently high on levels 1, 4, 5, and 6 and approximately in the middle range of scores on levels 2 and 3 while the regular teachers were in the low or middle range of scores on all levels. The manager-executives, like the parents of non-retarded, scored higher on the first two levels, in comparison to the pattern for the other groups, than on the remaining scale levels, and this group had the lowest scores of all groups on levels 5 and 6.

It is quite apparent at this point that the total ABS-MR scores are relatively meaningless in this research since different dimensions of attitudes seem to be being measured in a non-additive fashion. For example, the small difference between the special teachers and the parents of non-retarded on the total ABS-MR in no way reflects the striking difference and reversal of these groups on levels 1 and 2 on the one hand, and levels 3 and 4 (or levels 5 and 6 to a lesser extent) on the other.

In retrospect, and in view of the complexity of the relationships which have emerged, Hypothesis 14-16 which predicted the rank order of differences between groups seems presumptuous and it seems rather surprising in fact that the hypothesized ordering actually emerged on one

ABS-MR level. In short, the group-scale level relationship was an interactive one and not straightforward as predicted by Hypotheses 14 and 16 and it is concluded that these hypotheses are not supported.

Relating Attitudes and Multidimensionality

H-15: The ABS-MR scale levels or attitude subuniverses will form a Guttman Simplex for each of the German groups.

Hypothesis 15 was tested by plotting the combined content-intensity scale level intercorrelation matrices for each sample and subjecting these matrices to Kaiser's (1962) simplex approximation test, described in Chapter IV, which generates a goodness of fit value, i.e., $\underline{Q}^2$, for the obtained matrices and then rearranges these matrices into the "best" simplex order for which a $\underline{Q}^2$ value is also given. The obtained and empirically re-ordered matrices, along with their corresponding $\underline{Q}^2$ values, are shown in Table 23 for each of the German samples.

It will be recalled from the discussion of Kaiser's test in Chapter IV that two rather serious limitations seemed to be present: (a) the value $\underline{Q}^2$ is a descriptive statistic with no test of significance presently available to evaluate how well a simplex is approximated, and (b) re-ordering of the matrices according to Kaiser's method does not always produce the best simplex obtainable using

TABLE 23.--Q^2's for obtained and empirically ordered matrices on six level ABS-MR for German samples.

148 Special Teachers[1]

		1	2	3	4	5	6
Obtained Matrices	1	---					
	2	.49	---	Q^2 = .869			
	3	-.08	.05	---			
	4	.01	.07	.46	---		
	5	-.02	-.01	.25	.19	---	
	6	-.13	-.17	.27	.33	.25	---
Ordered Matrices	1	---					
	2	.49	---	Q^2 = .958			
	3	-.13	-.17	---			
	4	-.08	.05	.27	---		
	5	.01	.07	.33	.46	---	
	6	-.02	-.01	.25	.25	.19	---

74 Regular Teachers[2]

		1	2	3	4	5	6
Obtained Matrices	1	---					
	2	.27	---	Q^2 = .780			
	3	.18	-.10	---			
	4	.24	.08	.64	---		
	5	.49	.27	.12	.33	---	
	6	.16	.01	.22	.45	.24	---
Ordered Matrices	1	---					
	2	.27	---	Q^2 = .937			
	3	.27	.41	---			
	4	.08	.24	.33	---		
	5	-.10	.18	.12	.64	---	
	6	.01	.16	.24	.45	.22	---

146 Parents of Retarded[3]

		1	2	3	4	5	6
Obtained Matrices	1	---					
	2	.51	---	Q^2 = .804			
	3	-.02	.12	---			
	4	.05	.04	.38	---		
	5	.22	.25	.19	.08	---	
	6	.02	-.06	.08	.13	.02	---
Ordered Matrices	1	---					
	2	.51	---	Q^2 = .942			
	3	.22	.25	---			
	4	.02	.12	.19	---		
	5	.05	.04	.08	.38	---	
	6	-.02	-.06	.02	.08	.13	---

84 Manager-Executives[4]

		1	2	3	4	5	6
Obtained Matrices	1	---					
	2	.47	---	Q^2 = .341			
	3	-.02	.10	---			
	4	.08	.18	.64	---		
	5	.12	-.03	.03	.02	---	
	6	-.06	.00	.07	.21	.08	---
Ordered Matrices	1	---					
	2	.47	---	Q^2 = .342			
	3	.18	.08	---			
	4	.10	-.02	.64	---		
	5	-.03	.12	.02	.03	---	
	6	.00	-.06	.21	.07	.08	---

71 Parents of Non-Retarded[5]

		1	2	3	4	5	6
Obtained Matrices	1	---					
	2	.30	---	Q^2 = .838			
	3	.24	.53	---			
	4	.30	.38	.69	---		
	5	.21	.34	.27	.17	---	
	6	.16	-.12	.22	.40	.13	---
Ordered Matrices	1	---					
	2	.30	---	Q^2 = .838			
	3	.24	.53	---			
	4	.30	.38	.69	---		
	5	.21	.34	.27	.17	---	
	6	.16	-.12	.22	.40	.13	---

522 Total Sample[6]

		1	2	3	4	5	6
Obtained Matrices	1	---					
	2	.50	---	Q^2 = .874			
	3	-.11	.06	---			
	4	-.06	.02	.64	---		
	5	.11	.12	.18	.25	---	
	6	-.05	-.14	.19	.43	.25	---
Ordered Matrices	1	---					
	2	.50	---	Q^2 = .937			
	3	.12	.11	---			
	4	-.14	.05	.25	---		
	5	-.06	-.11	.18	.19	---	
	6	.02	-.06	.25	.43	.54	---

[1]Critical value of r at .05 level = .16.

[2]Critical value of r at .05 level = .23.

[3]Critical value of r at .05 level = .16.

[4]Critical value of r at .05 level = .22.

[5]Critical value of r at .05 level = .23.

[6]Critical value of r at .05 level = .09.

the given data. To these limitations may be added a third: neither Kaiser's test nor the simplex model itself, which is based on Guttman's (1959) Contiguity Hypothesis, allows for non-positive correlations, and, as may be seen in Table 23, each of the matrices obtained from the German samples contain from one to five negative correlations.[3]

Table 23 reveals that five negative correlations occur in the matrix for the special education teachers, one in the regular teacher matrix, two in the parents of retarded matrix, three in the manager-executive matrix, one in the parents of non-retarded matrix, and four in the matrix for the total German sample. All of the negative correlations occur in the first two columns of the matrices and involve correlations between either ABS-MR scale level 1 or 2 and the rest of the scale levels but never between either levels 1 and 2 or any combination of 3, 4, 5, and 6. As previously pointed out a number of times in connection with several other hypotheses, the "referent" in the facet design on which the ABS-MR is based switches from "others" to "self" from level 2 to level 3. Thus, each of the negative correlations involves a relationship between how the subject perceives others relating to the retarded and how

---

[3]The negative correlations were not the result of the procedure whereby content and intensity scores were combined into one criterion score. The content-only scale level intercorrelations and $\underline{Q}^2$ values were very similar to the figures presented in Table 23 and may be found in Appendix D, Table 30.

he perceives himself relating to this attitude object. Reference to the scale level means for the sample groups in Table 22 reveals that in all cases, with the exception of the negative correlations between levels 1 and 6 for the manager-executive group and between 2 and 6 for the parents of non-retarded group, the negative correlations are associated with lower scores on levels 1 and 2 than on the remaining scale level involved. This finding along with the finding of a negative to positive correlational shift from levels 2 to 3 in connection with Hypotheses 5, 8, 12, and 13, together with logic, all suggest that most of the negative correlations appearing in Table 23 are the likely result of attributing poor attitudes to others while attributing positive attitudes to oneself.

All of which, however, does not solve the problem of how to deal with negative correlations in Kaiser's simplex approximation test which is based in part on logarithms of the correlation coefficients. Kaiser (1962) offers three possible solutions:

> It might be possible in some cases to reflect variables--as in centroid factoring--to get rid of non-positive correlations . . . remembering that the reflected variables are being measured in opposite directions. . .
>
> Offending variables might simply be thrown out of the battery . . .
>
> Perhaps the best answer for non-positive correlations is simply to ignore them--to treat such correlations as missing data--and fit only to the positive correlations (p. 161).

The first of these suggestions was considered involved and complex enough to be beyond the scope of this research, particularly in view of the other limitations of the simplex approximation test. The second suggestion Kaiser himself dismisses as a "dodge," while the third would involve eliminating anywhere from 7% to 33% of the obtained data in each matrix--hardly a solution.

Other "solutions" which were rejected were to (a) add the value of the largest negative correlation in each matrix to all correlation coefficients in that matrix, and (b) change all non-significant correlations in each matrix to .00 in the hope of eliminating non-positive correlations. Solution "a" was rejected because Jordan (1969) has shown that the $\underline{Q}^2$ value is apparently affected in some cases by the magnitude of coefficients in the matrix and adding a constant to each coefficient would likely spuriously inflate the $\underline{Q}^2$ value while distorting the relationships involved, i.e., the amount of variance accounted for by each correlation coefficient would not be increased in like amount in each case. Solution "b" was rejected because of not only the large number of coefficients which would be reduced to .00, with a possible deflation of $\underline{Q}^2$, but because, more importantly, not all of the negative correlations would be eliminated by this procedure.

Because of both the apparent limitations of the simplex approximation test and the absence of a viable alternative procedure, it was finally decided to simply ignore the negative correlations and treat them as positive correlations for purposes of computer computation of $\underline{Q}^2$ values, while attempting at the same time to take this into account in evaluating the results. Accordingly, the $\underline{Q}^2$ values appearing in Table 23 are the $\underline{Q}^2$ values for these matrices with negative correlations treated as positive correlations.

With these limitations in mind, it is clear that the five negative correlations--including one significant at the .05 level--appearing in the matrix for the special education teachers render the obtained and ordered $\underline{Q}^2$ values for this group relatively meaningless. It would appear from the relatively large number of negative correlations appearing in columns 1 and 2 for this group that the special educators see a larger discrepancy between the attitudes of others toward the retarded and their own attitudes than do any of the other groups.

By the same token, the appearance of four negative correlations--including two significant at the .05 level--in the matrix for the total sample would seem to render the $\underline{Q}^2$ values meaningless here as well.

For the remaining samples, the number of negative correlations appearing in the matrices is small and none

reach significance at the .05 level; hence presumably more stock can be placed in the $\underline{Q}^2$ values for the two parent groups, the manager-executives, and the regular teachers. If Hamersma's (1969) criterion of a $\underline{Q}^2$ value of .70 or greater is accepted as evidence that a simplex has been approximated, then it may be concluded that a simplex has indeed been approximated in the case of the regular teachers, the parents of retarded, and the parents of non-retarded. It will be noted too that the obtained matrix in the parents of non-retarded group was also the "best" obtainable matrix, as ordered by Kaiser's procedure, while the $\underline{Q}^2$ values increased for both the regular teacher and parents of retarded matrices when the latter were re-ordered into the "best" simplex approximations.

The $\underline{Q}^2$ value for the manager-executive matrix, on the other hand, was only .341 obtained and .342 ordered. The reason for this low value is unclear since this matrix does not appear substantially poorer on the surface than that of the parents of retarded matrix. The mean absolute correlation value in both matrices is .14 while the number of order reversals is actually greater in the parents of retarded matrix than in the manager-executive matrix, i.e., nine versus eight. Nevertheless, re-submission of the matrices to computer analysis resulted in exactly the same $\underline{Q}^2$ values, and by Hamersma's (1969) criterion it must be concluded that a simplex is approximated for the parents of retarded but not for the manager-executives.

To briefly summarize, Hypothesis 15 predicted that a simplex would be obtained for each of the sample groups. Neither Guttman's (1959) Contiguity Hypothesis on which the simplex model is based nor Kaiser's (1962) simplex approximation test takes into account the occurrence of non-positive correlations. Since a number of negative correlations appeared in the matrices for the German samples, the possible meaning of these correlations was discussed and several suggested procedures for dealing with them were rejected as inappropriate. The negative correlations were ignored in computing $\underline{Q}^2$ values and reordering of matrices but were felt to constitute a sufficient threat to validity in the matrices for the special education teachers and total sample that a simplex could not be considered to be approximated in either case. For the remaining groups, a simplex was considered approximated, according to Hamersma's (1969) criterion of $\underline{Q}^2$ value greater than .70, for the regular teachers, the parents of retarded, and the parents of non-retarded but not for the manager-executives. Although a number of limitations of the simplex approximation test as applied to this data have been listed, it is currently the best and most objective measure available, and by its standard a simplex may be considered to have been obtained for three of the five German sample groups. Therefore, it is concluded that Hypothesis 15 is partially supported.

Relating Attitudes and
Additional Group Variables

H-17: Parents of moderately retarded children attending a special school will have more positive attitudes toward the mentally retarded than will parents of moderately retarded children awaiting admittance to a special school.

Hypothesis 17 was tested by dividing the parents of retarded group into two separate groups: those whose children were attending the Max-Wittmann special school for moderately retarded in Dortmund and those whose children were awaiting admittance to this school. A comparison was made of the two groups via an analysis of variance procedure since the computer was not programmed for a *t* test. The resulting *F*'s, however, produced the same results as a two tailed *t* test and, in order to test this directional hypothesis, the *F*'s were converted to the corresponding *t* values to permit one tailed tests. These results on each of the ABS-MR scale levels for the two groups are presented in Table 24.

Table 24 indicates that the predicted difference between the two groups was statistically significant at the .05 level on the hypothetical behavior and actual behavior levels 4 and 6. Smaller and non-significant differences between the two groups appeared on levels 3 and 5 in the predicted direction and opposite the predicted direction on levels 1 and 2.

TABLE 24.--ABS-MR adjusted means[1] and t's for parents of retarded children attending versus parents of retarded children not attending a special school for the moderately retarded.

ABS-MR Scale Levels	124 With Children Attending	20 With Children Not Attending	t
1. Stereotype	76.80	81.05	.81
2. Norm	76.24	83.05	1.38
3. Moral	127.54	126.65	.20
4. Hypo. Behavior	125.91	113.75	1.87*
5. Feelings	107.85	102.30	1.17
6. Behavior	94.35	86.70	1.85*
ABS-MR Total Score	608.69	593.50	.94

[1]Adjusted for sex and sample size.

*P.<.05.

The results suggest that the parents of moderately retarded in a special school see themselves as being more willing to interact with the retarded and report more favorable actual behavioral interactions than do those parents whose children have not yet been admitted to a special school. To what extent these differences might be attributable to a possible difference in the ages of the retarded children in the two groups is unclear. That significant differences between the two groups in the predicted direction did occur on two of the six ABS-MR scale levels is interpreted as providing partial support for Hypothesis 17.

H-18: There will be a positive relationship between the length of time a moderately retarded child has been attending a special school and the favorableness of his parent's attitude toward mental retardation.

Hypothesis 18 was tested by correlating the ABS-MR with the responses of the parents of moderately retarded children attending the Max-Wittmann school to item 142 of the questionnaire which measures the length of time a retarded child has been in a special school. The correlations resulting from this procedure are shown in Table 25.

Examination of Table 25 reveals that three scale level correlations reach significance: negative correlations on levels 3 and 4 and a positive correlation on level 6. The two negative correlations suggest the somewhat surprising interpretation that the longer a retarded child has been attending a special school, and hence presumably the older the child, the less favorable is the opinion of the parent with regard to how both other people should behave toward the retarded and how the parent himself would behave toward the retarded. This is in conjunction with the somewhat contradictory positive correlation on level 6 which suggests that the longer a retarded child has been in a special school the more positive are the parent's reported actual behavioral interactions with the retarded. In short, it would appear that the longer the retarded child has been in a special school the less the parent expects

TABLE 25.--ABS-MR-time a moderately retarded child has been attending a special school correlations for 111 parents of these children.

	ABS-MR Scale Level Correlations						
	1	2	3	4	5	6	Total
Time in School	-.04	-.05	-.31*	-.23*	.00	.35*	-.11

*P.<.05.

of both others and himself in reference to the retarded, while conversely, the more positive he finds his own behavioral interactions with the retarded. This finding may be interpreted as suggestive of increasing ambivalence being associated with the length of time the child has been in school or, on the other hand, it may be suggestive of the adoption of more realistic expectations of both others and the self as well as more accepting attitudes on the behavioral level with increasing age since similar findings resulted for these parents in connection with H-9 which related age to attitudes.

At any rate, the occurrence of only one significant positive correlation is seen as providing minimal and partial support for Hypothesis 18.

H-19: Experienced special education teachers of the mildly retarded will have more positive attitudes toward mental retardation than will inexperienced special education teachers of the mildly retarded.

Hypothesis 19 was tested by comparing the fully certified special education teacher and student special education teacher sub-groups described in Chapter IV via analysis of variance on the ABS-MR and conversion of the resultant F's to t's in a fashion similar to that described for Hypothesis 17. The results of this analysis are presented in Table 26.

TABLE 26.--ABS-MR adjusted means[1] and t's for experienced versus inexperienced special education teachers.

ABS-MR Scale Levels	51 Experienced Special Teachers	97 Inexperienced Special Teachers	t
1. Stereotype	47.26	51.46	1.26
2. Norm	66.88	70.41	1.01
3. Moral	137.53	134.23	1.03
4. Hypo. Behavior	128.00	126.88	.24
5. Feelings	112.41	107.23	1.55
6. Behavior	92.18	79.00	4.09*
ABS-MR Total Score	584.26	569.21	1.24

[1]Adjusted for sex and sample size.

*P.<.05.

Table 26 indicates a significant difference in the predicted direction between the two groups only on the behavioral level 6. Thus, the experienced special educators reported significantly more positive behavioral interactions with the retarded than did inexperienced special educators. It is not unreasonable to assume, however, that the former group also had more opportunity for such interactions as a function of their greater experience by definition, which casts some doubt on the meaningfulness of this statistically significant difference.

As an aside, it is interesting to note that the differences between the two groups, irrespective of significance level, was opposite the predicted direction on levels 1 and 2 and in the predicted direction on levels 3-6. Reference to the means in Table 24 for the parents of retarded in school and the parents of retarded not in school will reveal exactly the same phenomenon. Again, although these differences are not significant for the most part, they seem to provide further support for the oft noted trend in the German data of a shift from level 2 to level 3 where the "referent"--the person to whom the attitude is being attributed--shifts from "others" to "self."

Returning to Hypothesis 19, the meaningfulness of the one significant difference occurring in support of this hypothesis has been questioned and it is concluded that Hypothesis 19 is not supported.

H-20: Experienced regular teachers will have more positive attitudes toward the mentally retarded than will inexperienced regular teachers.

Hypothesis 20 was tested by comparing the fully certified and probationary elementary school teachers described in Chapter IV on the ABS-MR via analysis of variance and conversion of F's to t's as was done with regard to Hypotheses 17 and 19. The results of this analysis are presented in Table 27.

TABLE 27.--ABS-MR adjusted means[1] and t's for experienced versus inexperienced regular school teachers.

ABS-MR Scale Levels	22 Experienced Regular Teachers	52 Inexperienced Regular Teachers	t
1. Stereotype	60.91	64.42	.62
2. Norm	79.86	69.98	1.90*
3. Moral	123.09	138.40	3.22**
4. Hypo. Behavior	102.73	111.02	1.19
5. Feelings	94.23	89.37	.98
6. Behavior	84.23	73.15	2.30*
ABS-MR Total Score	545.05	546.35	.10

[1]Adjusted for sex and sample size.

*P.<.05 with one tailed test.

**P.<.05 with two tailed test.

Table 27 reveals that significant differences occurred between the two groups in the predicted direction on levels 2 and 6 with a one tailed test, while conversion of the obtained F to t on level 3 resulted in a significant difference between the two groups opposite to prediction when a two tailed test was applied. As was the case with the special teachers, the meaningfulness of the obtained difference between the experienced and inexperienced regular teachers on level 6 can be questioned because of the former group's possible greater opportunity for behavioral

interactions with the retarded. The remaining two differences between the two groups which reach statistical significance are in opposite directions and are contradictory.

Since the differences which have arisen between the two groups are not straightforward and consistent as predicted by Hypothesis 20, it is concluded that this hypothesis is not supported.

Relating Attitudes and Level of Retardation

H-21: Persons most familiar with the mildly mentally retarded will have more positive attitudes toward mental retardation in general than will persons most familiar with the moderately and/or severely mentally retarded.

Hypothesis 21 was tested by dividing the total German sample into five categories according to responses to questionnaire item 141 which asks the subject to mark the level of mental retardation with which he is most familiar or has the most knowledge about. Analysis of variance was then carried out for the five resultant groups on each of the ABS-MR scale levels in a fashion similar to that described for Hypotheses 14 and 16. Table 28 shows the means, F's, and multiple means test results for the five sub-groups divided according to the procedure described above.

TABLE 28.--ABS-MR adjusted means,[1] F's, and multiple means test results for total German sample according to level of retardation most familiar with.

ABS-MR Scale Levels	Level of Retardation Most Familiar With and N's: Mild N = 269	Moderate N = 136	Severe N = 8	Mild and Moderate N = 49	All Levels N = 44	F	Multiple Means Test*
1. Stereotype	61.60	75.65	98.75	65.51	79.20	17.90*	Se>Mo, Se>MM, Se>Mi; AL>MM, AL>Mi; Mo>MM, Mo>Mi
2. Norm	74.77	77.18	106.38	74.51	79.64	5.28*	Se>AL, Se>Mo, Se>Mi, Se>MM
3. Moral	132.06	125.82	141.50	130.47	124.75	4.12*	Se>Mo, Se>AL; Mi>Mo, Mi>AL
4. Hypo. Behavior	116.88	115.03	118.75	118.29	108.16	1.10	
5. Feelings	101.68	103.79	112.50	100.90	99.59	1.06	
6. Behavior	76.93	86.40	71.38	84.29	77.91	7.08*	MO>AL, Mo>Mi, Mo>Se; MM>Mi, MM>Se
ABS-MR Total Score	563.93	583.89	649.25	574.96	569.25	4.41*	Se>Mo, Se>MM, Se>AL, Se>Mi; Mo>Mi

[1]Adjusted for sex and sample size.

*P.<.05.

It will be noted that on the first three ABS-MR levels the small number of people (8) who chose the "severe" alternative to item 141 achieved the highest mean scores and that this group's scores were significantly higher than a number of others on these three levels. On level 6, on the other hand, this same group of 8 achieved the lowest mean score. Those who chose the "mild" alternative were significantly higher than those who chose "moderate" on level 3 and significantly lower on level 6. The N and scores of those who chose the "moderate" alternative (cf., Table 22) lead to the suspicion that most of those who chose this alternative were parents of moderately retarded children, although the computer analysis provided no specific check as to the actual composition of the groups in Table 28.

At any rate, only on ABS-MR level 3 did those who chose the "mild" retardation alternative score significantly higher than any of those who chose other alternatives. Hypothesis 21 which predicted higher scores for this group than for any of the others was therefore clearly not supported.

CHAPTER VI

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary

Problem

Renewed interest has been expressed recently in cross-cultural research in general and in cross-cultural studies of disability. It has been pointed out that attitudes, in part culturally dependent, are important in determining whether the mentally retarded obtain the encouragement and guidance necessary for them to lead socially useful and independent lives. This study constituted part of a comprehensive effort to research attitudes toward the mentally retarded in several nations using similar samples and a common instrument--the Attitude Behavior Scale-Mental Retardation (ABS-MR)--which was derived from Guttman's facet theory. The purpose of the present research was to investigate attitudes toward mental retardation across the six levels or sub-scales of the ABS-MR as well as to assess the predictive validity of certain hypothesized determinants and/or correlates of attitudes with selected groups in the Federal Republic of Germany (West Germany). Germany was included in the larger international study because of its similarity to

the United States in economic and technological development and difference in language, history, and educational provisions for the retarded.

Related Research

A thorough review of the literature was attempted on studies appearing in the last decade concerned with attitudes toward the mentally retarded. The studies reviewed varied considerably in sophistication of design and control and many were not comparable. Areas reviewed included (a) self attitudes of the retarded, (b) peer and general community attitudes, (c) teacher attitudes, (d) parental attitudes, (e) employer attitudes, and (f) attitude change.

Many of the studies reviewed produced results which were inconsistent and at times contradictory. Although no consensus existed, the review indicated that numerous variables seem to be related to attitudes toward mental retardation and that these variables generally fall into four categories: (a) demographic factors, (b) general value orientation, (c) knowledge of retardation, and (d) contact with the retarded. None of the studies employed an attitude scale based on the structural facet theory of attitudes proposed by Guttman and it was felt that this might have been a contributing factor to the lack of consistent results. In addition, not one study was found which attempted to relate or generalize findings cross-culturally.

Some methodological problems and considerations in cross-cultural research were reviewed, organized around the topics of relevancy, equivalency, and measurement as they related to the present research. It was shown that mental retardation is a relevant concept in Germany where approximately 6% of school age children are considered to fall in the educable and trainable ranges of mental retardation. The Germans have traditionally maintained a separate and segregated educational system for the educable retarded and other disability groups, while education for the trainable or moderately retarded has not even been considered until very recent times; as late as 1964 only about 15% of the latter were being served in special schools.

Measurement problems in cross-cultural attitude research revolve around the numerous dimensions of attitudes and the difficulty of controlling same. The position was taken that an attitude scale such as the ABS-MR which was systematically constructed according to facet theory provided the most efficient means of controlling the content, structure, and intensity dimensions of attitudes.

A final problem in cross-cultural research is in assuring instrument and sampling equivalency to in turn insure the collection of comparable data. The solution requires specialized local knowledge of culture and

nguage in sample selection and translation respectively, d it was felt that highly competent assistance was ob- ined in Germany in the present research.

strumentation

The criterion instrument used in this study--the S-MR--was constructed according to Guttman's facet theory ich specifies that an attitude universe can be sub- ructured into components which are systematically re- ted according to the number of identical conceptual ements they hold in common. Facet design permits the nstruction of a scale by a semantic, logical, a priori chnique and the prediction of the order structure re- lting from empirical application.

Guttman defined attitude as "a delimited totality behavior with respect to something" and proposed that ree semantic facets, each containing two elements, ld account for an eight permutation attitude universe. y four permutations were semantically consistent, how- r, and these four permutations or attitude levels ade- tely accounted for the item content used in an earlier earch effort. Guttman named these levels (1) Stereo- e, (2) Norm, (3) Hypothetical Interaction, and (4) sonal Interaction. Each of the three facets contained eak and a strong element and the four levels showed a gression from a weak to a strong form of behavior with additional strong element appearing on each level.

us, no strong elements appeared on the Stereotype level
d each succeeding level contained one more strong element
an its predecessor until the Personal Interaction level
ntained all strong elements. Guttman's Contiguity Hypo-
esis stated that attitude item levels close to each
ner in the semantic scale of their definitions would
so be close statistically and the resulting matrix of
itude level correlations would assume a simplex order-
. If the four levels defined above were plotted from
o 4 from left to right and from top to bottom in a cor-
lation matrix, a perfect simplex would exhibit descending
olute values of coefficients moving down the columns
l ascending values moving from left to right in the rows.
n Guttman rearranged the earlier data according to the
antic structural considerations of facet theory, the
dicted simplex relationship was essentially maintained,
h only one order reversal occurring.

Jordan accepted Guttman's three facets but included
others to form a six level paradigm of attitude struc-
e. Again, each facet contained a weak and a strong
ment and each level contained one more strong element
n its predecessor. Jordan's six levels were (1)
ietal Stereotype, (2) Societal Interactive Norm, (3)
sonal Moral Evaluation, (4) Personal Hypothetical Be-
ior, (5) Personal Feelings, and (6) Actual Personal
avior. This structural model of attitudes is termed

njoint struction while additional facets accounting for ecific item content is termed disjoint struction. A x level attitude scale measuring attitudes toward mental tardation--the ABS-MR--was constructed from a mapping ntence containing the conjoint and disjoint struction cets so that each and every item corresponded to a combi- tion of facet elements in the mapping sentence. The nal scale contained a total of 20 items on each level d the content measure of each item was followed by an tensity measure. A preliminary study was undertaken mparing a group of special education-rehabilitation aduate students, education sophomores, and Belize achers.

General problems of validity were discussed and it pointed out that the ABS-MR provided a somewhat unique ortunity to compare different dimensions of attitudes. implex was essentially obtained for each of the groups predicted by facet theory and it was felt that this ory and the mapping sentences which follow from it par- ularly enhance content validity. The ABS-MR differ- iated the three groups and this was interpreted as pro- ing concurrent validation.

Various aspects of reliability were discussed and er-Richardson-like reliabilities for the three groups the six levels and total scores ranged from .60 to .89. reliabilities obtained were comparable to those ob- ned on other attitude scales and it was concluded that

the reliability of the ABS-MR was adequate for group research. A procedure for combining content and intensity scores into one score for each item was described. The procedure increases the range of scores for each item and was used in the present German research in the hope of enhancing reliability and clarifying relationships.

A number of ABS-MR limitations were discussed, most of which stemmed from the newness and complexity of the technique. Among these limitations were included failure to control for (a) response sets, (b) social desirability, (c) homogeneous disjoint struction, and (d) alternative permutations of facet elements.

A questionnaire containing measures of the independent variables of the study was also described. Among the items in this questionnaire were measures of (a) demographic variables, (b) Change Orientation--a series of questions used in an earlier study, (c) opinions on educational aid and planning, (d) contact with handicapped persons, (e) Efficacy--a scale designed to measure attitudes toward man's effectiveness in the face of his natural environment, and (f) Knowledge About Mental Retardation--a scale also adapted from previous research.

The minor alterations in the ABS-MR and the questionnaire which resulted from the translation into German were made in an attempt to maintain concept equivalence rather than strict literal translation. These changes were listed and briefly discussed.

sign and Analysis

Samples in the Federal Republic of Germany were lected to be comparable to groups tested or to be tested other countries or cultures. The samples consisted of 147 parents of moderately retarded children, (b) 148 cial education teachers of the mildly retarded, (c) regular elementary school teachers, (d) 84 manager- cutives, and (e) 71 parents of normal children. The cial characteristics of each sample and the sampling hniques used were described with a view toward possible itations on external validity. Most of the individuals ted were from the Dortmund area of West Germany and the ting was done in groups with the exception of part of parents of retarded group and all of the manager- cutive group which were surveyed by mail. All in all, was felt that the obtained samples were quite good, erally representative, and adequate for a study of this e.

A total of 15 major research hypotheses were formulated h were based on previous research and which were to ested in all of the countries and/or cultures parti- ting in the larger international study. In addition, special characteristics of the German samples also ided the opportunity to test six additional hypotheses h are unique to this research. The total of 21 theses will be listed in the following segment of this ary along with the results of the analysis.

The data obtained were analyzed by computer at
:higan State University. Product-moment, partial, and
.tiple correlation procedures were used to test the
'ious hypotheses, as were one-way analysis of variance
l a multiple means test. In addition, a simplex approxi-
ion test was used which produces a descriptive statis-
($\underline{Q}^2$) for obtained attitude level matrices and matrices
rdered into a "best" simplex order, despite some obvious
itations because no better alternative procedure was
ilable. The .05 level of significance was accepted
pite the danger of Type I errors because of the early
ge of facet theory development in the study of attitudes.

ults

Kuder-Richardson type reliabilities were obtained
each of the sample groups on each of the ABS-MR levels
total scores for both content scores alone and com-
ed content-intensity scores to test the efficacy of
s procedure in the present research. The combined
re reliabilities ranged from .60 to .92 and were con-
tently higher than the content-only reliabilities which
ged from .55 to .90, while the average item-to-scale
el correlations also increased through the combining
edure. The reliability estimates for the German
les were very similar to those of the standardization
ips, with the moral evaluation level 3 reliabilities
ig lowest and the ABS-MR total score reliabilities

ing highest in both cases. The overall reliability of e German translation of the ABS-MR was considered adeate for the present research.

A summary of the results of the testing of each pothesis follows. On several of the correlational hypoeses the individual sample groups were relatively homoneous with respect to the predictor variables, while at e same time differences between the groups on these riables showed up in the correlations for the total mple.

H-1: Persons who score high in efficacy will score h in positive attitudes toward the mentally retarded. ll but statistically significant correlations between efficacy variable and ABS-MR levels 1 and 2 (stereoe and norm) and total scores for the entire sample were erpreted as providing only partial and weak support this hypothesis.

H-2: Persons who score high in knowledge about tal retardation will score high in positive attitudes ard the mentally retarded. Hypothesis 2 was not supted. A predominance of negative correlations between knowledge scale and the ABS-MR suggested in fact that, n the exception of special educators, knowledge may be ersely related to attitudes toward the mentally reded.

H-3: The more frequent the contact with mentally retarded persons the higher will be the intensity scores on the ABS-MR, regardless of the direction (positiveness or negativeness) of attitude. Hypothesis 3 was generally supported as significant correlations were found between all but level 2 (normative) ABS-MR intensity scores and frequency of contact with the retarded for the total sample. As a digression, content and combined content-intensity scores were also correlated with the contact variable. The former correlations for the total sample were significantly negative on levels 1 and 2 (stereotype and norm) and significantly positive on levels 3-6 moral, hypothetical behavior, feelings, and actual behavior). The opposite direction correlations cancelled each other out on the total score correlation, with frequency of contact and total ABS-MR content correlation for the total sample being .00. This finding suggested that the ABS-MR was measuring different dimensions of attitudes on the different scale levels. The combined content-intensity correlations closely resembled the content-only correlations but were somewhat higher overall, thus supporting the rationale for combining content-intensity scores.

H-4: The more frequent the contact with other disability groups the higher will be the intensity scores on the ABS-MR regardless of the direction of attitude.

strumentation errors in the questionnaire measuring the dependent variables prevented a reasonable test of pothesis 4.

H-5: High frequency of contact with mentally re-rded persons will be associated with favorable attitudes ward the mentally retarded if high frequency is concur-t with (a) alternative rewarding opportunities, (b) e of avoidance of the contact, and (c) enjoyment of contact. As with Hypothesis 4, instrumentation errors vented a full test of Hypothesis 5 but it was found t two of the four variables originally to be tested, unt and enjoyment of contact, were positively related attitudes toward the retarded for the total sample on els 3-6 of the ABS-MR in direct support of Hypothesis 5. versely, both amount and enjoyment of contact were nd to be negatively related to attitudes on ABS-MR els 1 and 2 for the total sample. It was therefore cluded that this hypothesis was only partially sup-ted, and it was further noted that the "referent" in facet design on which the ABS-MR was based--the ferent" being the individual to whom the attitude or avior toward the retarded is attributed--shifts from ners" to "self" from levels 2 to 3.

H-6: Persons who score high on stated importance religion will score low on positive attitudes toward mentally retarded. Hypothesis 6 was not supported as

e data suggested a weak positive relationship between
e religious importance variable and the ABS-MR whereas
e hypothesis predicted a negative relationship.

H-7: Persons who score high on stated adherence to
ligion will score low on positive attitudes toward the
ntally retarded. As with H-6, this hypothesis was not
pported as the data again suggested a weak positive re-
tionship between ABS-MR attitudes and stated adherence
religion while a negative relationship had been pre-
cted between these variables.

H-8: Amount of education will be positively related
favorable attitudes toward the mentally retarded. Be-
use of the apparent homogeneity of the individual samples,
figures for the total sample were again most instruc-
ve. These figures suggested that an increasing amount
education was negatively related to attitudes on ABS-MR
els 1 and 2 and positively related on levels 3 and 4.
reasing education was thus related to a tendency to
ribute poor attitudes to others on the stereotypic and
mative levels and positive attitudes to oneself on the
al evaluative and hypothetical behavior levels. Edu-
ion was unrelated to the affective and behavior levels
nd 6 and it was concluded that Hypothesis 8 was only
tially supported. It was further noted that total ABS-MR
relations with the education variable and several other
iables were a meaningless function of the magnitude of
osite direction scale level correlations.

H-9: Age will be positively related to favorable ttitudes toward the mentally retarded. While education as found to be related to ABS-MR scores primarily at the ore abstract and impersonal levels 1-3, age was found to e positively related to attitudes primarily on the more oncrete and personal affective and behavior levels 5 and 6 or the total sample. Rather weak although significant ositive relationships appeared for both variables on evel 4 but it was concluded that Hypothesis 9 was sup- orted primarily on levels 5 and 6 of the ABS-MR.

H-10: Women will score higher on positive attitudes oward the mentally retarded than will men. Although an rror in computer programming prevented a test of this pothesis within individual samples, no differences were und between the total number of males and females and pothesis 10 was therefore not supported.

H-11: Persons who score high on change orientation ll score high on positive attitudes toward mental retar- tion. This hypothesis was not supported as the various ange orientation questions were apparently measuring fferent dimensions of this variable on each individual S-MR level. Secondly, the individual change orientation estions were apparently being related to different dimen- ons of attitudes on the various ABS-MR scale levels. In ort, both change orientation and ABS-MR attitudes appeared be multidimensional and the pattern of relationships

which emerged was not constant within each group so that the straightforward relationship predicted by Hypothesis 11 simply did not emerge.

H-12: Agreement with government aid to education will be positively related to favorable attitudes toward the mentally retarded. Hypothesis 12 received its strongest support in the special educator group where 6 of 8 correlations between opinions regarding local and federal aid to education and ABS-MR levels 3-6 reached significance. Significant negative correlations appeared once again for the total sample between the stereotypic level 1 and both the local and federal aid variables, while significant positive correlations appeared for both variables on levels 3 and 4 (moral and hypothetical behavior), with the latter being interpreted as providing only partial support for this hypothesis.

H-13: Agreement with centralized government planning of education will be positively related to favorable attitudes toward the mentally retarded. Agreement with centralized government planning of education was positively related to attitudes toward the retarded only on the moral evaluation ABS-MR level 3, while it was negatively related to levels 1 and 2 in the total sample. Thus, the negative to positive correlational shift from levels 1 and 2 to level 3 where the "referent" changes from "others" to "self" was once again noted in connection with this

hypothesis which, aside from the positive correlation appearing on level 3, was not otherwise supported.

H's-14 & 16: The groups will assume the following order with respect to favorable attitudes toward the mentally retarded: Teachers of the Mentally Retarded>Parents of the Mentally Retarded>Regular Teachers>Manager-Executives>Parents of Non-Retarded Children. The combined Hypotheses 14 and 16 were not strongly supported as the groups assumed the hypothesized order only on the hypothetical behavior level 4, and even here not all of the means were significantly different from one another. It was noted that the parents of normals scored higher than all other groups on ABS-MR levels 1 and 2 where attitudes are attributed to "others" while the special educators scored lowest of all groups on these two levels. On levels 3 and 4 where attitudes are attributed to the "self" just the reverse occurred with special educators scoring highest and parents of normals scoring lowest. This finding further supported the notion that the ABS-MR was measuring different dimensions of attitudes and, secondly, that ABS-MR total scores were meaningless since the very small difference between the special teachers and parents of non-retarded on the total scores in no way reflected the striking difference and reversal of these groups on levels 1 and 2 versus levels 3 and 4.

H-15: The ABS-MR scale levels or attitude sub-universes will form a Guttman Simplex for each of the German groups. Neither Guttman's Contiguity Hypothesis on which the simplex model is based nor the statistical simplex approximation test accounts for non-positive correlations and a number of these occurred in the matrices for the German samples. All of the negative correlations were between either level 1 or 2 and the rest of the scales and hence involved negative relationships between how the subjects perceived others relating toward the retarded and how they perceived themselves relating to this group. Several suggested procedures for dealing with the negative correlations were rejected as inappropriate and they were ignored in computing simplex approximation $\underline{Q}^2$ values but were felt to constitute a sufficient threat to validity in the special teacher and total sample matrices that a simplex could not be considered approximated in either case. Using a $\underline{Q}^2$ criterion value of .70 or greater, a simplex was considered approximated for the regular teachers, the parents of retarded, and the parents of normals but not for the manager-executives. Although a number of limitations of the simplex approximation test were listed it was still considered the best and most objective measure available, and by its standard a simplex was approximated in three of the five groups. Hypothesis 15, therefore, was partially supported.

H-17: Parents of moderately retarded children attending a special school will have more positive attitudes toward the mentally retarded than will parents of moderately retarded children awaiting admittance to a special school. The predicted difference between these two groups emerged only on the hypothetical and actual behavior levels 4 and 6, suggesting that those parents of retarded attending a special school see themselves as being more willing to interact with the retarded and as having had more favorable behavioral interactions with this group, which is in partial support of Hypothesis 17.

H-18: There will be a positive relationship between the length of time a moderately retarded child has been attending a special school and the favorableness of his parent's attitude toward mental retardation. A negative relationship emerged on levels 3 and 4 and a positive relationship only on level 6 which suggested that the length of time a retarded child was in school was related to decreasing parental expectations of both others and the self in reference to the retarded, which was concurrent with more positive attitudes on the behavioral level, thus providing only partial and minimal support for this hypothesis.

H-19: Experienced special education teachers of the mildly retarded will have more positive attitudes toward mental retardation than will inexperienced special education teachers of the mildly retarded. The predicted difference

between the groups emerged only on the behavioral ABS-MR level 6. The meaningfulness of this difference was questioned however, since the experienced special educators by definition would have had more opportunity for behavioral interactions with the retarded than the inexperienced special teachers. Hypothesis 19 was therefore not supported.

H-20: Experienced regular teachers will have more positive attitudes toward the mentally retarded than will inexperienced regular teachers. Differences emerged between these two groups in the predicted direction on the normative and behavior levels 2 and 6 and opposite to prediction on the moral evaluation level 3. The meaningfulness of the difference on level 6 was again questioned because of the experienced teachers presumed greater opportunity for interaction with the retarded. The remaining differences were in opposite directions and not straightforward and consistent as predicted by Hypothesis 20; this hypothesis was therefore not supported.

H-21: Persons most familiar with the mildly mentally retarded will have more positive attitudes toward mental retardation in general than will persons most familiar with the moderately and/or severely mentally retarded. Only on the moral evaluation level 3 did those subjects who stated they were most familiar with mild retardation score higher than any of the subjects who chose other alternatives. The small number of people

choosing the "severe" alternative accounted for most of the differences which emerged, scoring highest on levels 1-3 and lowest on ABS-MR level 6. Hypothesis 21 was clearly not supported.

Discussion of Results

An attempt will be made in this section to review, interpret, and integrate the major findings of the present research.

ABS-MR Reliability

The close similarity between the absolute values of the reliability estimates obtained for the German samples and for the ABS-MR standardization groups is rather striking. In addition, the same pattern was observed in both instances, with the lowest coefficients of reliability appearing on scale levels 1, 3, and 6. Thus similar reliability coefficients and a similar pattern of these coefficients have been noted in three countries, i.e., the United States, the Federal Republic of Germany, and Belize (British Honduras), and in three different languages, i.e., English, German, and Spanish. This suggests that the ABS-MR is measuring the different dimensions of attitudes in the various countries with approximately the same degree of reliability, which further suggests that the translations have been accurate in both cases. The cross-cultural implications of this finding, along with other

findings of the present research and findings emerging from other countries participating in the larger international study will be discussed more fully in a forthcoming book by the director of the international study.[1]

Here it may be stated generally that the German subjects, as well as the U. S. and Belize subjects, were apparently less certain and consistent with regard to how other people compare and evaluate the retarded and how other people should behave toward this group (levels 1 and 3) than they were of the general societal norm and how they themselves would behave toward the retarded (levels 2 and 4). In short, it may be that while the norm seems clear, the degree to which other people actually observe and should observe the norm is less clear to the subject than the degree to which he himself would observe that norm. In essence then, the findings suggest the not unreasonable conclusion that the subjects were more certain and consistent about their own probable behavior toward the retarded than they were of other people's attitudes and behavior toward this group.

As previously indicated, level 6 reliabilities were also lower in the patterns for both the standardization groups and the German samples than the reliabilities for levels 2, 4, and 5. In addition, the absolute values of reliabilities obtained on this level were somewhat lower

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[1]See Chapter I.

for the Germans than for the U. S. and Belize groups. Why the latter should occur is unclear unless perhaps the behavioral interactions described in this sub-scale are not as common in the German cultural situation as in the U. S. and Belize cultures; this seems to be the most reasonable explanation since the content-only reliabilities on level 6 were nearly identical to the combined score reliabilities and it will be recalled that the content scores on this level simply reflect whether or not the subject has had the particular experience in question.

"Intensity" scores on level 6, as was previously pointed out, were not comparable to those of levels 1-5; level 6 "intensity" measured the degree of pleasantness or unpleasantness of behavioral interactions while intensity on levels 1-5 measured the degree of certainty of expressed negative, neutral, or positive attitudes. The combining procedure had the effect of changing level 6 scores from a yes-no (have or have not had the experience in question) to a negative-positive continuum more comparable to the negative-positive continua on levels 1-5. Although this had the effect of making level 6 scores more comparable to the other ABS-MR levels, it apparently did not seriously alter the relative range of scores on

level 6 since the reliabilities for this level increased negligibly as a result of the combining procedure.[2]

There were, however, slight but consistent increases in the reliability of the remaining scale levels as a result of combining content-intensity scores and the effectiveness of the procedure was particularly demonstrated with the lowest reliabilities which showed the greatest overall increase from the combining procedure. Reliabilities apparently increased through the procedure because the increased range of possible scores for each item increased the discriminative ability of each item.

The scale level reliabilities were generally good, and comparable to other attitude scales. On the other hand, while the ABS-MR total score reliabilities were quite high, a caveat is unfortunately in order. These total scores, while quite reliable, are all but meaningless since it was shown that similar total scores may be made up of considerably different scale level scores, as witness the special teacher and parents of non-retarded scores depicted in Table 22, Chapter V. Total scores, in short, while highly reliable, may not reflect even striking scale level differences and are, for that reason, misleading and invalid.

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[2]Reference to the scoring procedure used on level 6 combined content-intensity scores, found in Appendix B, suggests that the most logical content-intensity combinations would result in scores of 7-9, thus resulting in the same relative range as content-only responses which permitted scores of 1-3.

Relating Attitudes and Efficacy

The Efficacy scale, which measures the subject's perception of man's degree of control over or effectiveness in the face of his natural environment, was not a strong predictor of attitudes toward the mentally retarded in Germany, as significant correlations appeared for the total sample only on the stereotype and normative levels 1 and 2 and the relatively meaningless total score. Thus, in the total German sample, this variable correlates with attitudes primarily at the most abstract and impersonal levels. It may be that man's degree of control over his environment is not the relevant issue in the highly industrialized and technological German culture that it may be in some of the more underdeveloped nations.[3] This interpretation, if correct, should emerge more clearly in the subsequent cross-cultural collation of data.

It may be too that combining the content and intensity responses for this variable in a manner similar to the combining procedure used for ABS-MR content and intensity variables would increase the discriminative function of the Efficacy scale and result in more substantial correlations.

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[3]Table 29 in Appendix D also reveals that mean scores on this variable were similar among the various sample groups.

Relating Attitudes and Knowledge

Knowledge about mental retardation, it turns out, is apparently primarily a predictor of negative attitudes toward the mentally retarded in Germany. If this finding is replicated or cross validated in Germany it would seem to have profound implications for public information-education programs in that country since it would appear that such information is negatively related to attitudes, not only at the stereotype level but at the affective and behavioral levels as well.

Before concluding definitely that intellectual knowledge of retardation is related to negative attitudes toward the retarded for all but special educators in Germany, this finding should be demonstrated once again. In addition, the knowledge scale used in this study should be cross validated with German samples. It may be that the seven items which discriminated between the MSU special education-rehabilitation students and education sophomores do not discriminate as well between knowledgeable and unknowledgeable groups in Germany. This is certainly suggested by the mean scores on this variable appearing in Table 29, Appendix D, which suggests it would perhaps be better to score all 16 items in this scale, or perhaps abandon it all together in favor of a scale which discriminates more adequately cross-culturally. This is, however, a problem for future research.

Relating Attitudes and Contact

It seems reasonable to assume that the more contact an individual has had with the mentally retarded the more firmly would his attitude be entrenched and the more certain he would be of his responses to an attitude scale with the mentally retarded as the object. This turned out to be precisely the case in the present research and H-3, which predicted a positive relationship between intensity of attitudes toward the retarded and amount of contact with this group, was perhaps more strongly supported than any other hypothesis.

What emerged unexpectedly, however, was that both amount and enjoyment of contact were related to negative attitudes on levels 1 and 2 and positive attitudes on levels 3-6. This suggested that increasing amounts of contact as well as increasing enjoyment of contact with the retarded were related to the subjects attributing negative attitudes to others on the stereotype and normative levels and positive attitudes toward themselves on the moral evaluation, hypothetical behavior, feeling, and actual behavior levels.

This descrepancy between how the subjects perceived others relating to the retarded and how they perceived themselves relating to this group emerged in connection with a number of hypotheses and is somewhat surprising in view of the historical stereotype of the authoritarian

German personality. It may be that the profound changes and displacements of the past quarter century have significantly altered the 'German personality.' It may be too that a projective defense mechanism is operating here, with the subjects attributing their own negative attitudes to others. On the other hand, sampling limitations make such speculation risky at best, and only future research efforts utilizing samples more representative of the German nation as a whole and covering a wider variety of research topics can answer such a question.

Relating Attitudes and Religiosity

The religion variables, i.e., religious importance and religious adherence, were not strong predictors of attitudes in the German samples and the predicted negative relationship between these variables and ABS-MR attitudes did not materialize. A predicted negative relationship between the religious variables and attitudes toward the physically handicapped also failed to emerge in Jordan's (1968) earlier cross-cultural study of attitudes and it would appear that religious importance and adherence are simply not strongly correlated with attitudes toward handicapped people. The German data suggest, if anything, a weak positive relationship between the religious variables and ABS-MR attitudes and perhaps a further breakdown of the data by religious denomination would produce

more clear cut findings similar to those of Zuk (1959), described in Chapter II, who found a significant relationship between a mother's religious denomination and acceptance of her retarded child.

Relating Attitudes and Demographic Variables

Amount of education was found to be negatively related to ABS-MR attitudes on the stereotypic and normative levels, where the subject attributes attitudes and beliefs to others, and positively on the moral and hypothetical behavior levels, where he attributes attitudes and beliefs to himself. Education was unrelated to the more concrete and personal affective and behavior levels. Thus, amount of education is apparently primarily related to the more abstract dimensions of attitudes and has little effect on feelings about and behavior toward the retarded in the German populations sampled.

Increasing age, on the other hand, showed a positive relationship to attitudes on precisely these same affective and behavior levels and was largely unrelated to the more abstract and impersonal ABS-MR levels. Increasing education was therefore related to favorable beliefs about what others should do and what the subject himself would do in respect to the retarded, whereas increasing age was related primarily to favorable feelings about and behavioral interactions with the retarded. Age, it would then appear,

brings about a more meaningful and personal acceptance of the retarded where education has its influence primarily on a more cognitive, intellectual acceptance of this group.

Sex, on the other hand, was unrelated to attitudes in the total German sample in this research whereas it was a rather strong predictor of attitudes in Jordan's (1968) study of cross-cultural attitudes toward the physically disabled. Germany was not included in the earlier cross-cultural study and it remains to be seen whether the lack of sexually differential attitudes toward the retarded is typical only of Germany. Unfortunately, a computer programming error prevented a test of possible interactive effects of sex within the various sample groups.

Relating Attitudes and Change Orientation

The change orientation questions behaved inconsistently in their prediction of attitudes on the various ABS-MR levels and the data suggested that both the change orientation questions themselves and the ABS-MR were multidimensional. The result was a rather confusing and inconsistent mixture of positive and negative correlations which were impossible to interpret in any consistent fashion. Since a similar confusing array of positive and negative correlations appeared in Jordan's (1968) research in which different attitude scales were employed, it would

appear that the problem lies primarily in the change orientation questions themselves rather than in the criterion instruments.

Two solutions suggest themselves: (a) the change orientation questions should be revised so that they measure the same theoretical variable in a more consistent fashion, or (b) they should be treated independently in future research efforts, with each being related to the dependent variable in a straightforward correlational analysis.

Relating Attitudes to Opinions on Educational Aid and Planning

These variables, like the amount of education variable, were primarily related to attitudes only at the more abstract and impersonal levels of attitude. As with the education variable, negative relationships appeared on the stereotype and normative levels for the total sample, where attitudes are attributed to others, and positive relationships appeared on the moral evaluative and hypothetical behavior levels, where attitudes are attributed to the self. Only among the special education teachers of the retarded, who were intimately familiar with both education and the retarded, did these variables predict attitudes at the feeling and behavior levels. It may be that educational aid and planning is simply not a significant predictor among the other German groups sampled because of their lack of intimate familiarity with problems inherent in the education of the retarded.

Relating Attitudes and
Group Membership

If the ABS-MR scale level mean scores presented in Table 3 (Chapter III) for the standardization groups are compared to the mean scores of German samples presented in Table 22 (Chapter V), an interesting pattern emerges. For the standardization groups, the following rank ordering of scale level mean scores occurred in each case: scale level 1<2<3>4>5>6. This pattern also emerged in three of the five German groups while in the remaining two groups, the two groups of parents, one reversal occurred from this ordering in each case. Thus, the fact that only two order reversals occurred in a total of 48 mean scores would seem to provide strong evidence that the ABS-MR is measuring essentially the same dimensions of attitudes across cultures and it will be interesting to note whether this pattern continues to hold for the remaining countries and cultural groups participating in the international study.

A semantic translation of this pattern of scores would be as follows: the subjects perceive other people comparing the retarded to non-retarded rather unfavorably (Societal Stereotype); what other people think is usually right or wrong behavior toward the retarded (Societal Interactive Norm) is perceived somewhat more favorably by the subject; the most favorable perception is with regard to how the subjects themselves feel other people should

behave toward the retarded (Personal Moral Evaluation); somewhat less favorably perceived are the subjects' own probable behaviors toward the retarded (Personal Hypothetical Behavior); still less favorable to the retarded are the affects the subjects experience in connection with this group (Personal Feelings); and, finally, even less favorable are the subjects' reported behavioral interactions with the retarded. In short, the most favorable attitudes expressed toward the retarded are with regard to how other people should behave toward this group and how the subject thinks he himself would behave, while the least favorable attitudes are expressed with regard to how both others and the self actually feel about and behave toward this group.

As was previously pointed out, the total ABS-MR scores are relatively meaningless since they may not reflect even striking differences between groups on the individual scale levels. This was particularly the case with the parents of normals and the special teachers where it was found that the former group scored highest on levels 1 and 2 and lowest on 3 and 4, while the latter group scored lowest on 1 and 2 and highest on 3 and 4. Thus, the group most likely to be objectively knowledgeable and interested in the retarded, the teachers of mildly retarded, obtained the lowest scores on the stereotypic and normative levels while the group most likely to be naive in

this regard, the parents of normals, scored highest on these two levels. In fact, all of the groups scored significantly higher than the special teachers on level 1, while only the regular teachers failed to score significantly higher than this group on level 2. It may be concluded that the special teachers, the group perhaps most objectively knowledgeable about the attitudes of others toward the retarded, perceived these attitudes as being more unfavorable than did any other group. Even the parents of retarded attributed more favorable attitudes to others than did the special teachers and it is hard to resist the interpretation of perhaps some denial of reality on the part of these parents.[4]

The parents of retarded and special teachers scored generally close together and higher than the other groups on ABS-MR scale levels 4, 5, and 6 (hypothetical behavior, feelings, and actual behavior) where the attitudes being expressed were more personal and concrete. The regular teachers were in the middle range of scores on levels 3-6, but like the special teachers, these teachers of normal children perceived the attitudes of others, being

[4]Table 29 in Appendix D seems to provide some further evidence for denial on the part of these parents in that, with the exception of the manager-executives, these parents of retarded children scored lower than any other group on the amount-of-contact with mentally retarded persons variable. On the other hand, these parents obtained a mean score on the enjoyment-of-contact variable second only to the special teachers, and it will be noted that mean scores on this variable assumed the ordering predicted for ABS-MR attitudes in Hypotheses 14 and 16.

expressed on levels 1 and 2, as being unfavorable in comparison to the perceptions of the other groups. The manager-executives scored uniformly low on the more personal and concrete levels 4-6, and like the parents of normals, this group achieved its best position relative to the other groups on the more abstract and impersonal levels 1 and 2.

It will be recalled that amount and enjoyment of contact with the retarded, while significantly negatively related to attitudes on the stereotypic and normative levels, were both found to be significantly positively related to the remaining ABS-MR levels. In addition, the two groups having the most actual contact with the retarded, i.e., the parents of moderately retarded and the teachers of mildly retarded, also scored highest on the more concrete and personal dimensions of attitudes. While it is obvious that a number of other uncontrolled and confounding selection factors were likely influencing the contact-attitude relationship, nevertheless, a worthwhile future research effort would be to provide the opportunity for enjoyable contacts with the retarded, perhaps through institutional tours, work-study programs, etc., to determine if increasing contact with the retarded would be reflected in more favorable attitudes on the affective and behavior levels in groups similar to the manager-executives, whose degree of acceptance of the retarded can be a crucial

factor in the latter's vocational adjustment and general well being.

Relating Attitudes and Multidimensionality

The difference between how the German subjects perceived the attitudes of others toward the retarded, expressed on ABS-MR scale levels 1 and 2, and how they perceived their own attitudes, expressed on levels 3-6, has been discussed in connection with a number of variables. Negative correlations between either level 1 or 2 and various combinations of the rest of the scales appeared in all of the scale level correlation matrices in Table 23 (Chapter V), and these negative correlations were felt to constitute a sufficient threat to validity for the special educator and total German sample matrices that a simplex could not be considered to have been approximated in either case. The negative correlations appearing in the matrix for the total sample provide some further support for the suggestion that perhaps the stereotyped view of the authoritarian German personality will have to be re-examined. At the very least, it would appear that the German population sampled in the present research did not perceive their own attitudes toward the retarded as being as seriously affected by their perceptions of the attitudes of others as was true of the U.S. and Belize groups employed in the ABS-MR standardization.

For three of the remaining German groups, i.e., the regular teachers and the two parent groups, a simplex was considered approximated, as predicted by Guttman's (1959) Contiguity Hypothesis. Thus, some support has been obtained for the proposition that there exists an invariate structure of attitudes toward the mentally retarded across cultures. This proposition is further supported by the pattern of relative scale level scores which has emerged in the U.S., Belize, and German groups discussed in the last section, i.e., scores on scale level 1<2<3>4>5>6.

An interesting pattern which emerges in the German data is that in each of the sample group matrices ABS-MR level 4 is more strongly correlated with level 6 than is level 5. For the German populations sampled, therefore, Hypothetical Behavior, or how the subject says he would behave toward the retarded is a better predictor of his reported Actual Behavior than are the Personal Feelings e experiences toward the retarded. This finding seems to e in keeping with the traditional notion of the German ving maximum value to intellectual and technological rsuits while minimizing emotional factors. At any rate, would appear that what the Germans in the present research say they would do in respect to the retarded is a ter predictor of their behavior than the way they feel ut the latter. A similar finding was noted for the ize group of teachers (see Chapter III, Table 3 and

related discussion) and this was in contrast to the two U.S. samples where level 5 was more strongly correlated with level 6 than was level 4. Collation of data from the remaining countries and cultures participating in the larger international study should reveal whether feelings provide the best prediction of behavior toward the retarded only in the United States populations sampled.

The limitations of the simplex approximation test devised by Kaiser (1962) and used in the present research have been well documented. These limitations, briefly, revolved around the procedure's apparent inability to produce a perfect simplex criterion from the existing data, the lack of a frequency distribution and test of significance for the $\underline{Q}^2$ statistic, and the test's failure to easily and reasonably handle non-positive correlations appearing in the matrices. The first limitation cited could perhaps be avoided by generating a $\underline{Q}^2$ value for matrices intuitively and subjectively re-ordered into the best possible simplex ordering, as was done with the data in Table 6 in Chapter V, and using the $\underline{Q}^2$ value obtained from this matrix as a criterion by which to evaluate the value obtained from the original, unrearranged matrix. The second and third limitations seem likely to require much more complex solutions. While Kaiser's (1962) procedure appears to be the best available at the present time, it is clear that it is of limited value in the present type research.

Relating Attitudes and
Additional Group Variables

The special characteristics of the German samples facilitated the testing of several hypotheses specific to this research. It was found, for example, that parents of moderately retarded children attending the Max-Wittmann special school in Dortmund had more favorable attitudes toward the mentally retarded on the hypothetical and actual behavior levels of the ABS-MR than did a similar group of parents whose children were awaiting admittance to the same school. While it would be gratifying to conclude that this difference was a direct result of the school's influence, at least two cautions are in order. First, the group of parents whose children were not yet admitted to the special school in question may not have been adequately represented by the 40% of these parents who responded to a mail survey. Secondly, it is not known to what extent a possible age differential in the groups influenced the results. Age was shown to be positively related to attitudes at the more concrete and personal ABS-MR levels and it is not unreasonable to assume that both the children attending this school, as well as their parents, were older than those not attending and their parents. Nevertheless, the possibility that such schooling could influence parental attitudes on these levels is an intriguing one and could be the object of future research efforts incorporating additional controls.

The length of time a parent's moderately retarded child had been attending the Max-Wittmann school was found to be negatively related to attitudes on the moral evaluation and hypothetical behavior ABS-MR levels, and positively on the actual behavior level. These findings suggest that the duration of special education for these children is related to decreasing parental expectations of the behavior of both others and themselves, which is concurrent with more positive and pleasurable behavioral interactions with the retarded. It may be, therefore, that increasing time in school resulted in lower and perhaps more realistic expectations for these parents and more acceptance of the retarded in general, and perhaps their own children specifically, on the behavioral level. Once again, age and other possible confounding variables could be better controlled in future efforts.

The predicted differences between experienced and inexperienced special educators and regular teachers did not emerge in a consistent fashion other than on the behavioral level where the experienced groups, by definition, would have had more opportunity for behavioral interactions with the retarded. A re-test of the inexperienced special educators after a years further experience is presently in progress and may shed some additional light on this factor which does not appear to be strongly related to attitudes in the German populations sampled.

Since the German language does not provide a general term equivalent to the English "mental retardation,"[5] but provides instead terms for more specific levels of retardation, it had been hypothesized that those subjects most familiar with the less socially disabling mild form of retardation would express more favorable attitudes toward the retarded in general than those primarily familiar with the moderately and/or severely retarded. The hypothesis was completely unsupported and most of the differences which emerged were accounted for by the eight people who said they were most familiar with the severely retarded. Because of the extremely small number of people who chose this alternative, even the findings for this group are suspect, although statistically significant, until replicated. Otherwise, the level of retardation with which the subjects were most knowledgeable about and familiar with did not seem to be related to their attitudes toward the mentally retarded in general.

Recommendations for Further Research

A number of shortcomings in the present research have become evident by now and an attempt has been made throughout the body of this thesis to list several of these while at the same time providing suggestions as to how future researchers might avoid certain pitfalls while extending

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[5]The term Intelligenzbehindert was finally decided on as equivalent, and literally means "handicapped in intelligence."

research in this area. The final section, therefore, will summarize some of the implications for future research arising from this study.

Criterion Instrumentation

The position has been taken in the present research that the systematic construction of an attitude scale according to the principles of facet theory provides the most efficient means of controlling the numerous content, structure, and intensity dimensions of attitudes summarized in Chapter II from Duijker (1955). The ABS-MR was apparently the first attitude scale whose construction was guided by a facet design and some of the following suggestions gained through experience with this instrument have already been incorporated in studies by Erb (1969), Hamersma (1969), and Maierle (1969).

1. Response sets sould be discouraged in similar instruments by randomly varying from question to question the most favorable or positive response alternative.

2. Future ABS-MR content and intensity scores should be combined into one score for each item in the main analysis to increase instrument reliability and discrimination and to make scores on level 6 more comparable to those on levels 1-5.

3. Total scores on the ABS-MR should be carefully evaluated and perhaps disregarded in future research since

the present study demonstrated that similar total scores may be made up of strikingly different scale level scores.

4. Disjoint struction should be better controlled in future instruments, with perhaps the same item content appearing on all levels as Hamersma (1969) has suggested.

5. A reduction of scale length in future instruments would permit the desirable incorporation of alternative conjoint struction permutations suggested by Maierle (1969).

Independent Variable Instrumentation

It has become apparent in the present research that a real need exists for more adequate predictor variables. Undoubtedly such variables exist in the form of the many psychological tests available today, and some of these, interest inventories and scales of values for example, could perhaps be profitably incorporated into future attitude studies. The independent variables used in the present research appeared to be particularly inadequate correlates of attitudes on the more concrete and personal ABS-MR attitude dimensions. A thorough revision of the Personal Questionnaire containing the independent variables used in this study is indicated, and the following suggestions are in order:

1. The content and intensity scores on the Efficacy scale should be combined into one score, similar to

he manner in which ABS-MR content-intensity scores were ombined in the present study, in an effort to increase ts predictive ability.

2. All of the questions in the Mental Retardation nowledge scale should be scored in future research, or, t the very least, the seven questions in this scale used n the present research should be cross validated in each ultural group tested.

3. The series of Change Orientation questions should ther be revised so that they measure this theoretical riable in a more consistent fashion, or they should be alyzed separately and independently in their relation-ip to the criterion in future research.

4. Certain of the demographic variable questions ould be revised, as Whitman (1970) has done, so that a re effective response continuum results for correlation th the criterion.

5. The religious variables employed in this re-arch should be further analyzed by denominational sect future efforts.

ss-Cultural Aspects

That several of the statistically significant corre-ional findings in the present study emerged primarily the total sample attests to the within-group homo-ity and between-group differences on a number of

variables for the German samples,[6] which in turn may be cited as evidence for the adequacy and representativeness of these samples since they were chosen from populations on the basis of these presumed characteristics. Even so, a number of special characteristics of these samples were cited which seriously limit the generalizability of the obtained findings even to the whole of these specific German populations, not to mention the German nation as a whole. The other crucial cross-cultural aspects which emerged in the present research were in instrument translation and general logistical problems. The following suggestions, therefore, seem appropriate:

1. Efforts should be made in future cross-cultural studies to secure more representative and externally valid samples.

2. Knowledge about local circumstances and intimate familiarity with the local language is mandatory in solving translation, sampling, and logistical problems in cross-cultural research, and the assistance of competent social scientists in each country is indispensable.

Analysis

The data in the present research were analyzed by computer and, in general, it is felt that both the instrument and programming errors described in Chapter V, which obviated the complete testing of several hypotheses and

[6] See Table 29, Appendix D.

resulted in numerous unnecessary delays, could be avoided in future efforts by meticulously careful advance planning and programming. More specifically, the following recommendations have grown out of experience gained in this study.

1. A two-way analysis of variance procedure should be employed in future studies using the ABS-MR as a criterion to analyze group-scale level interactions.

2. A more adequate and rigorous simplex approximation statistic with a test of significance is needed.

3. If the simplex approximation test used in the present study is employed in future efforts, subjective ordering of the obtained data will produce a perfect simplex criterion $\underline{Q}^2$ value by which to evaluate the $\underline{Q}^2$ value obtained for the original matrix.

Hypotheses

A number of unexpected findings have emerged in the German data which could readily be tested in hypothesis form in the remaining countries and/or cultures scheduled to participate in the larger international study, described in Chapter I, to determine whether these findings are generalizable across cultures or whether, on the other hand, they are atypical and characteristic only of the German groups tested. Similarly, several of the hypotheses could be replicated within Germany itself to better assess

the generalizability of findings within that nation. Accordingly, some suggested hypotheses for future research are as follows:

1. Amount and enjoyment of contact with the mentally retarded will be negatively related to attitudes on ABS-MR scale levels 1 and 2, and positively on levels 3-6.

2. Amount of education will be primarily related to ABS-MR attitudes on the more abstract levels 1-3.

3. Age will be primarily related to ABS-MR attitudes on the more concrete and personal levels 4-6.

4. Special education-rehabilitation personnel will score lowest on ABS-MR levels 1 and 2 and highest on levels 3 and 4, while the most naive group will score highest on 1 and 2 and lowest on 3 and 4.

5. The ABS-MR scale level scores obtained for each group tested will assume the following order: $1<2<3>4>5>6$.

Theory

It was shown in Chapter III that the ABS-MR evolved directly from Guttman's (1959) facet theory of attitude structure. Facet theory and design imposes a sequential and systematic semantic order on what would otherwise often be a series of disparate and seemingly unconnected psychological events. That a rather complex empirical hypothesis growing out of this semantic ordering, i.e., Guttman's Contiguity Hypothesis, has been largely supported by the data from several cultural groups attests

to the utility and fruitfulness of this approach to ordering psychological events and concepts on a descriptive level. The real weakness in the present research seems to lie primarily in the lack of adequate, coherent, and systematic theoretical underpinnings at the attitude causation level. In short, the attitude predictors, more so than the criterion, were largely inadequate in this research. Aside from the obvious global need for improved social-psychological theory in general, two more specific and final recommendations follow:

1. A way should be found to theoretically incorporate the occurrence of negative relationships between various levels of an attitude universe.

2. Facet theory and design facilitates the connection between abstract theory and empirical observation and should be incorporated into a variety of social-psychological research efforts.

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APPENDICES

APPENDIX A.1

ATTITUDE BEHAVIOR SCALE: ABS-MR

ATTITUDE BEHAVIOR SCALE--MR

DIRECTIONS

This booklet contains statments of how people feel about certain things. In this section you are asked to indicate for each of these statements how most other people believe that mentally retarded people compare to people who are not retarded. Here is a sample statment.

Sample 1.

1. Chance of being blue-eyed

(1) less chance
2. about the same
3. more chance

If other people believe that mentally retarded people have less chance than most people to have blue eyes, you should circle the number 1 as shown above.

If other people believe the mentally retarded have more chance to have blue eyes, you should circle the number 3 as shown below.

1. Chance of being blue-eyed

1. less chance
2. about the same
(3) more chance

After each statement there will also be a question asking you to state how certain or sure you were of your answer. Suppose you answered the sample question about "blue eyes" by marking about the same.

Next you should then indicate how sure you were of this answer. If you felt sure of this answer, you should circle the number 3 as shown below in Sample 2.

Sample 2.

1. Chance of being blue-eyed

1. less chance
(2) about the same
3. more chance

2. How sure are you of this answer?

1. not sure
2. fairly sure
(3) sure

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ABS-I-MR

Directions: Section I

In the statements that follow you are to circle the number that indicates how other people compare mentally retarded persons to those who are not mentally retarded, and then to state how sure you felt about your answer. Usually people are sure of their answers to some questions, and not sure of their answers to other questions. It is important to answer all questions, even though you may have to guess at the answers to some of them.

Other people generally believe the following things about the mentally retarded as compared to those who are not retarded:

1. Energy and vitality ⟷

   1. less energetic
   2. about the same
   3. more energetic

2. How sure are you of this answer?

   1. not sure
   2. fairly sure
   3. sure

3. Ability to do school work

   1. less ability
   2. about the same
   3. more ability

4. How sure are you of this answer?

   1. not sure
   2. fairly sure
   3. sure

5. Memory

   1. not as good
   2. same
   3. better

6. How sure are you of this answer?

   1. not sure
   2. fairly sure
   3. sure

7. Interested in unusual sex practices

   1. more interested
   2. about the same
   3. less interested

8. How sure are you of this answer?

   1. not sure
   2. fairly sure
   3. sure

9. Can maintain a good marriage

   1. less able
   2. about the same
   3. more able

10. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

11. Will have too many children

    1. more than most
    2. about the same
    3. less than most

12. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

ABS-I-MR

Other people generally believe the following things about the mentally retarded as compared to those who are not mentally retarded:

13. Faithful to spouse

1. less faithful
2. about the same
3. more faithful

14. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

15. Will take care of his children

1. less than most
2. about the same
3. better than most

16. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

17. Likely to obey the law

1. less likely
2. about the same
3. more likely

18. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

19. Does steady and dependable work

1. less likely
2. about the same
3. more likely

20. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

21. Works hard

1. not as much
2. about the same
3. more than most

22. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

23. Makes plans for the future

1. not as likely
2. about the same
3. more likely

24. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

25. Prefers to have fun now rather than to work for the future

1. more so than most people
2. about the same
3. less so than most people

26. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-I-MR

Other people generally believe the following things about the mentally retarded as compared to those who are not retarded:

27. Likely to be cruel to others

1. more likely
2. about the same
3. less likely

28. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

29. Mentally retarded are sexually

1. more loose than others
2. about the same
3. less loose than others

30. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

31. Amount of initiative

1. less than others
2. about the same
3. more than others

32. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

33. Financial self-support

1. less able than others
2. about the same
3. more able than others

34. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

35. Mentally retarded prefer

1. to be by themselves
2. to be only with normal people
3. to be with all people equally

36. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

37. Compared to others, education of the mentally retarded

1. is not very important
2. is of uncertain importance
3. is an important social goal

38. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

39. Strictness of rules for mentally retarded

1. must be more strict
2. about the same
3. need less strict rules

40. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-II-MR

Directions: Section II

This section contains statements of ways in which other people sometimes act toward people. You are asked to indicate for each of these statements what other people generally believe about interacting with the mentally retarded in such ways. You should then indicate how sure you feel about your answer.

Other people generally believe that mentally retarded persons ought:

41. To play on the school playground with other children who are not mentally retarded

    1. usually not approved
    2. undecided
    3. usually approved

42. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

43. To visit in the homes of other children who are not mentally retarded

    1. usually not approved
    2. usually undecided
    3. usually approved

44. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

45. To go on camping trips with other children who are not mentally retarded

    1. usually not approved
    2. undecided
    3. usually approved

46. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

47. To be provided with simple tasks since they can learn very little

    1. usually believed
    2. undecided
    3. not usually believed

48. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

49. To stay overnight at the homes of children who are not mentally retarded

    1. usually not approved
    2. undecided
    3. usually approved

50. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

ABS-II-MR

Other people generally believe that mentally retarded persons ought:

51. To go to parties with other children who are not mentally retarded

1. usually not approved
2. undecided
3. usually approved

52. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

53. To be hired for a job only if there are no qualified non-mentally retarded people seeking the job

1. usually approved
2. undecided
3. usually not approved

54. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

55. To live in the same neighborhood with people who are not mentally retarded

1. usually not approved
2. undecided
3. usually approved

56. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

57. To date a person who is not mentally retarded

1. usually not approved
2. undecided
3. usually approved

58. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

59. To go to the movies with someone who is not mentally retarded

1. usually not approved
2. undecided
3. usually approved

60. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

61. To marry a person who is not mentally retarded

1. usually not approved
2. undecided
3. usually approved

62. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

63. To be sterilized (males)

1. usually approved
2. undecided
3. usually not approved

64. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-II-MR

Other people generally believe that mentally retarded persons ought:

65. To be sterilized (females)

1. usually approved
2. not sure
3. usually not approved

66. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

67. To be desirable as friends

1. not usually approved
2. not sure
3. usually approved

68. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

69. To be regarded as having sex appeal

1. not usually so
2. not sure
3. usually so

70. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

71. To be regarded as dangerous

1. usually so regarded
2. not sure
3. notusually regarded so

72. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

73. To run machines that drill holes in objects

1. usually not approved
2. not sure
3. usually approved

74. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

75. To be trusted with money for personal expenses

1. not usually so
2. not sure
3. usually so

76. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

77. To work at jobs he can do even if he has almost no speech

1. not usually so
2. not sure
3. usually so

78. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

79. To be forced to totally provide for themselves

1. usual
2. not sure
3. not usual

80. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-III-MR

Directions: Section III

This section contains statments of the "right" or "moral" way of acting toward people. You are asked to indicate whether you yourself agree or disagree with each statement according to how you personally believe you ought to behave toward mentally retarded persons. You should then indicate how sure you feel about your answer.

In respect to people who are mentally retarded, do you believe that it is usually right or usually wrong:

81. To take a mentally retarded child on a camping trips with normal children

1. usually wrong
2. undecided
3. usually right

82. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

83. To permit a mentally retarded child to go to the movies with children who are not mentally retarded

1. usually wrong
2. undecided
3. usually right

84. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

85. To allow a mentally retarded child to visit overnight with a child who is not mentally retarded

1. usually wrong
2. undecided
3. usually right

86. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

87. To take a mentally retarded child to a party with children who are not mentally retarded

1. usually wrong
2. undecided
3. usually right

88. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

89. For the government to pay part of the cost of elementary education for mentally retarded children

1. usually wrong
2. undecided
3. usually right

90. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-III-MR

In respect to people who are mentally retarded, do you believe that it is usually right or usually wrong:

91. For the government to pay the full cost of elementary education for mentally retarded children

1. usually wrong
2. undecided
3. usually right

92. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

93. For the government to pay the full cost of a high school education for mentally retarded children

1. usually wrong
2. undecided
3. usually right

94. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

95. For the government to pay part of the medical costs related to the disability

1. usually wrong
2. undecided
3. usually right

96. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

97. For the government to pay all of the medical costs related to the disability

1. usually wrong
2. undecided
3. usually right

98. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

99. To be given money for food and clothing by the government

1. usually wrong
2. undecided
3. usually right

100. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

101. To mix freely with people who are not mentally retarded at parties

1. usually wrong
2. undecided
3. usually right

102. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-III-MR

In respect to people who are mentally retarded, do you believe that it is usually right or usually wrong:

103. To go on dates with someone who is not mentally retarded

1. usually wrong
2. undecided
3. usually right

104. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

105. To go to the movies with someone who is not mentally retarded

1. usually wrong
2. undecided
3. usually right

106. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

107. To marry someone who is not mentally retarded

1. usually wrong
2. undecided
3. usually right

108. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

109. To be a soldier in the army

1. usually wrong
2. undecided
3. usually right

110. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

111. To provide special laws for their protection

1. usually wrong
2. undecided
3. usually right

112. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

113. To provide special help to get around the city

1. usually wrong
2. not sure
3. usually right

114. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

115. To sterilize the mentally retarded

1. usually right
2. not sure
3. usually wrong

116. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-III-MR

In respect to people who are mentally retarded, do you believe that it is usually right or usually wrong:

117. To put all mentally retarded in separate classes, away from normal children

1. usually right
2. not sure
3. usually wrong

118. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

119. To reserve certain jobs for the mentally retarded

1. usually wrong
2. not sure
3. usually right

120. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-IV-MR

Directions: Section IV

This section contains statments of ways in which people sometimes act toward other people. You are asked to indicate for each of these statments whether you personally would act toward mentally retarded people according to the statment. You should then indicate how sure you feel about this answer.

In respect to a mentally retarded person, would you:

121. Share a seat on a train for a long trip

1. no
2. don't know
3. yes

122. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

123. Have such a person as a fellow worker

1. no
2. don't know
3. yes

124. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

125. Have such a person working for you

1. no
2. don't know
3. yes

126. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

127. Live in the next-door house or apartment

1. no
2. don't know
3. yes

128. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

129. Extend an invitation to a party at your house

1. no
2. don't know
3. yes

130. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

131. Accept a dinner invitation at his house

1. no
2. don't know
3. yes

132. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-IV-MR

In respect to a mentally retarded person, would you:

133. Go to the movies together

1. no
2. don't know
3. yes

134. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

135 Go together on a date

1. no
2. don't know
3. yes

136. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

137. Permit a son or daughter to date this person

1. no
2. don't know
3. yes

138. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

139. Permit a son or daughter to marry this person

1. no
2. don't know
3. yes

140. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

141. Feel sexually comfortable together

1. no
2. don't know
3. yes

142. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

143. Enjoy working with the mentally retarded

1. no
2. don't know
3. yes

144. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

145. Enjoy working with the mentally retarded as much as other handicapped

1. no
2. don't know
3. yes

146. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

147. Enjoy working with mentally retarded who also have emotional problems

1. no
2. don't know
3. yes

148. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-IV-MR

In respect to a mentally retarded person, would you:

149. Hire the mentally retarded if you were an employer

1. no
2. don't know
3. yes

150. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

151. Want the mentally retarded in your class if you were a teacher

1. no
2. don't know
3. yes

152. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

153. Require the mentally retarded to be sterilized if you were in control

1. yes
2. don't know
3. no

154. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

155. Separate the mentally retarded from the rest of society if you were in control

1. yes
2. don't know
3. no

156. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

157. Believe that the care of the mentally retarded is an evidence of national social development

1. no
2. don't know
3. yes

158. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

159. Provide, if you could, special classes for the mentally retarded in regular school

1. no
2. don't know
3. yes

160. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-V-MR

Directions: Section V

This section contains statements of actual feelings that people may hold toward the mentally retarded. You are asked to indicate how you feel toward people who are mentally retarded compared to people who are not mentally retarded. You should then indicate how sure you feel of your answer.

How do you actually feel toward persons who are mentally retarded compared to others who are not mentally retarded:

1. Disliking

   1. more
   2. about the same
   3. less

2. How sure are you of this answer?

   1. not sure
   2. fairly sure
   3. sure

3. Fearful

   1. more
   2. about the same
   3. less

4. How sure are you of this answer?

   1. not sure
   2. fairly sure
   3. sure

5. Horrified

   1. more
   2. about the same
   3. less

6. How sure are you of this answer?

   1. not sure
   2. fairly sure
   3. sure

7. Loathing

   1. more
   2. about the same
   3. less

8. How sure are you of this answer?

   1. not sure
   2. fairly sure
   3. sure

9. Dismay

   1. more
   2. about the same
   3. less

10. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

11. Hating

    1. more
    2. about the same
    3. less

12. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

13. Revulsion

    1. more
    2. about the same
    3. less

14. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. sure

ABS-V-MR

How do you actually feel toward persons who are mentally retarded compared to others who are not mentally retarded:

15. Contemptful

1. more
2. about the same
3. less

16. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

17. Distaste

1. more
2. about the same
3. less

18. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

19. Sickened

1. more
2. about the same
3. less

20. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

21. Confused

1. more
2. about the same
3. less

22. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

23. Negative

1. more
2. about the same
3. less

24. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

25. At ease

1. less
2. about the same
3. more

26. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

27. Restless

1. more
2. about the same
3. less

28. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

29. Uncomfortable

1. more
2. about the same
3. less

30. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-V-MR

How do you actually feel toward persons who are mentally retarded compared to others who are not mentally retarded:

31. Relaxed

1. less
2. about the same
3. more

32. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

33. Tense

1. more
2. about the same
3. less

34. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

35. Bad

1. more
2. about the same
3. less

36. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

37. Calm

1. less
2. about the same
3. more

38. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

39. Happy

1. less
2. about the same
3. more

40. How sure are you of this answer?

1. not sure
2. fairly sure
3. sure

ABS-VI-MR

Directions: Section VI

This section contains statements of different kinds of actual experiences you have had with mentally retarded persons. If the statment applies to you, circle yes. If not, you should circle no.

Experiences or contacts with the mentally retarded:

41. Shared a seat on a bus, train, or plane
1. no
2. uncertain
3. yes

42. Has this experience been mostly pleasant or unpleasant?
1. no such experience
2. unpleasant
3. in between
4. pleasant

43. Eaten at the same table together in a restaurant
1. no
2. uncertain
3. yes

44. Has this experience been mostly pleasant or unpleasant?
1. no such experience
2. unpleasant
3. in between
4. pleasant

45. Lived in the same neighborhood
1. no
2. uncertain
3. yes

46. Has this experience been mostly pleasant or unpleasant?
1. no such experience
2. unpleasant
3. in between
4. pleasant

47. Worked in the same place
1. no
2. uncertain
3. yes

48. Has this experience been mostly pleasant or unpleasant?
1. no such experience
2. unpleasant
3. in between
4. pleasant

49. Had such a person as my boss or employer
1. no
2. uncertain
3. yes

50. Has this experience been mostly pleasant or unpleasant?
1. no such experience
2. unpleasant
3. in between
4. pleasant

51. Worked to help such people without being paid for it
1. no
2. uncertain
3. yes

52. Has this experience been mostly pleasant or unpleasant?
1. no such experience
2. unpleasant
3. in between
4. pleasant

53. Have acquaintance like this
1. no
2. uncertain
3. yes

54. Has this experience been mostly pleasant or unpleasant?
1. no such experience
2. unpleasant
3. in between
4. pleasant

ABS-VI-MR

Experiences or contacts with the mentally retarded:

55. Have good friends like this
    1. no
    2. uncertain
    3. yes

56. Has this experience been mostly pleasant or unpleasant?
    1. no such experience
    2. unpleasant
    3. in between
    4. pleasant

57. Donated money, clothes, etc., for people like this
    1. no
    2. uncertain
    3. yes

58. Has this experience been mostly pleasant or unpleasant?
    1. no such experience
    2. unpleasant
    3. in between
    4. pleasant

59. Have a husband (or wife) like this
    1. no
    2. uncertain
    3. yes

60. Has this experience been mostly pleasant or unpleasant?
    1. no such experience
    2. unpleasant
    3. in between
    4. pleasant

61. I am like this, myself
    1. no
    2. uncertain
    3. yes

62. Has this experience been mostly pleasant or unpleasant?
    1. no such experience
    2. unpleasant
    3. in between
    4. pleasant

63. My best friend is like this
    1. no
    2. uncertain
    3. yes

64. Has this experience been mostly pleasant or unpleasant?
    1. no such experience
    2. unpleasant
    3. in between
    4. pleasant

65. Received pay for working with people like this
    1. yes
    2. no

66. Has this experience been mostly pleasant or unpleasant?
    1. no such experience
    2. unpleasant
    3. in between
    4. pleasant

67. My children have played with children like this
    1. no
    2. uncertain
    3. yes

68. Has this experience been mostly pleasant or unpleasant?
    1. no such experience
    2. unpleasant
    3. in between
    4. pleasant

ABS-VI-MR

Experiences or contacts with the mentally retarded:

69. My children have attended school with children like this

1. no
2. uncertain
3. yes

70. Has this experience been mostly pleasant or unpleasant?

1. no such experience
2. unpleasant
3. in between
4. pleasant

71. Voted for extra taxes for their education

1. no
2. not certain
3. yes

72. Has this experience been mostly pleasant or unpleasant?

1. no such experience
2. unpleasant
3. in between
4. pleasant

73. Worked to get jobs for them

1. no
2. not certain
3. yes

74. Has this experience been mostly pleasant or unpleasant?

1. no such experience
2. unpleasant
3. in between
4. pleasant

75. Have you sexually enjoyed such people

1. no
2. no answer
3. yes

76. Has this experience been mostly pleasant or unpleasant?

1. no such experience
2. unpleasant
3. in between
4. pleasant

77. Studied about such people

1. no
2. yes

78. Has this experience been mostly pleasant or unpleasant?

1. no such experience
2. unpleasant
3. in between
4. pleasant

79. Have worked as a teacher with such people

1. no
2. yes

80. has this experience been mostly pleasant or unpleasant?

1. no such experience
2. unpleasant
3. in between
4. pleasant

This part of the booklet deals with many things. For the purpose of this study, the answers of all persons are important.

Part of the questionnaire has to do with personal information about you. Since the questionnaire is completely anonymous or confidential, 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 answer you choose.

81. Please indicate your sex.

    1. Female
    2. Male

82. Please indicate your age as follows:

    1. Under 20 years of age
    2. 21-30
    3. 31-40
    4. 41-50
    5. 50 - over

83. 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, but to your professional work or related experiences with education.

    1. I have had no such experience
    2. Elementary school (Grade school)
    3. Secondary school (High school)
    4. College or University
    5. Other types

84. What is your marital status?

1. Married
2. Single
3. Divorced
4. Widowed
5. Separated

85. What is your religion?

1. I prefer not to answer
2. Catholic
3. Protestant
4. Jewish
5. Other or none

86. About how important is your religion to you in your daily life?

1. I prefer not to answer
2. I have no religion
3. Not very important
4. Fairly important
5. Very important

87. About how much education do you have?

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

88. Some people are more set in their ways than others. How would you rate yourself?

1. I find it very difficult to change
2. I find it slightly difficult to change
3. I find it somewhat easy to change
4. I find it very easy to change my ways

89. 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."

1. Strongly disagree
2. Slightly disagree
3. Slightly agree
4. Strongly agree

90. 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 that are doing wrong, or that they are doing right?

1. It is always wrong
2. It is usually wrong
3. It is probably all right
4. It is always right

91. People have different ideas about what should be done concerning automation and other new ways of doing things. He do you feel about the following statement?

"Automation and similar new procedures should be encouraged (in government, business, and industry) since eventually they create new jobs and raise the standard of living."

1. Strongly disagree
2. Slightly disagree
3. Slightly agree
4. Strongly agree

92. 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."

1. Strongly disagree
2. Slightly disagree
3. Slightly agree

93. Some poeple 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 feelings on this?

1. Strongly disagree
2. Slightly disagree
3. Slightly agree
4. Strongly agree

94. 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?

1. Strongly disagree
2. Slightly disagree
3. Slightly agree
4. Strongly agree

95. People have different ideas about planning for education in their nation. Which one of the following do you believe is the best way?

1. Educational planning should be primarily directed by the church
2. Planning for education should be left entirely to the parents
3. Educational planning should be primarily directed by the individual city or other local governmental unit
4. Educational planning should be primarily directed by the national government

96. In respect to your religion, about to what extent do you observe the rules and regulations of your religion?

1. I prefer not to answer
2. I have no religion
3. Sometimes
4. Usually
5. Almost always

97. I find it easier to follow rules than to do things on my own.

1. Agree strongly
2. Agree slightly
3. Disagree slightly
4. Disagree strongly

QUESTIONNAIRE: HP

This part of the questionnaire deals with your experiences or contacts with handicapped persons. Perhaps you have had much contact with handicapped persons, or you may have studied about them. On the other hand, you may have had little or no contact with handicapped persons, and may have never thought much about them at all.

98. Some handicapped conditions are listed below. In respect to these various handicaps, with which one have you had the most actual experience?

1. blind and partially blind
2. deaf, partially deaf, or speech impaired
3. crippled or spastic
4. mental retardation
5. social or emotional disorders

In the following questions, 99 through 103 you are to refer to the category of the handicapped persons you have just indicated.

99. The following questions have to do with the kinds of experiences you have had with the category of handicapped person you indicated in the previous question. If more than one category of experience applies, please choose the answer with the highest number.

1. I have read or studied about handicapped persons through reading, movies, lectures, or observations
2. A friend or relative is handicapped
3. I have personally work with handicapped persons as a teacher, counselor, volunteer, child care, etc.
4. I, myself, have a fairly serious handicap

100. Considering all of the times you have talked, worked, or in some other way had personal contact with the category of handicapped persons indicated in question 98, about how many times has it been altogether?

1. Less than 10 occasions
2. Between 10 and 50 occasions
3. Between 50 and 100 occasions
4. Between 100 and 500 occasions
5. More than 500 occasions

101. When you have been in contact with this category of handicapped people how easy for you, in general, would it have been to have avoided being with these handicapped persons?

1. I could not avoid the contact
2. I could generally have avoided these personal contacts only at great cost of difficulty
3. I could generally have avoided these personal contacts only with considerable difficulty
4. I could generally have avoided these personal contacts but with some inconvenience
5. I could generally have avoided these personal contacts without any difficulty or inconvenience

102. During your contact with this category of handicapped persons, did you gain materially in any way through these contacts, such as being paid, or gaining academic credit, or some such gain?

1. No, I have never received money, credit, or any other material gain
2. Yes, I have been paid for working with handicapped persons
3. Yes, I have received academic credit or other material gain
4. Yes, I have both been paid and received academic credit

103. If you have been paid for working with handicapped persons, about what percent of your income was derived from contact with handicapped persons during the actual period when working with them?

1. No work experience
2. Less than 25%
3. Between 26 and 50%
4. Between 51 and 75%

104. If you have ever worked with any category of handicapped persons 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, soemthing else that was (or is) acceptable to you as a job?

1. No such experience
2. No other job was available
3. Other jobs available were not at all acceptable to me
4. Other jobs available were not quite acceptable to me
5. Other jobs available were fully acceptable to me

105. 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?

1. Less than 10 occasions
2. Between 10 and 50 occasions
3. Between 50 and 100 occasions
4. Between 100 and 500 occasions
5. More than 500 occasions

106. How have you generally felt about your experiences with mentally retarded persons?

1. No experience
2. I definitely disliked it
3. I did not like it very much
4. I liked it somewhat
5. I definitely enjoyed it

LIFE SITUATIONS

This section of the booklet deals with how people feel about several aspects of life or life situations. Please indicate how you feel about each situation by circling the answer you choose.

107. It should be possible to eliminate war once and for all

1. strongly disagree
2. disagree
3. agree
4. strongly agree

108. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

109. Success depends to a large part on luck and fate.

1. strongly agree
2. agree
3. disagree
4. strongly disagree

110. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

111. Some day most of the mysteries of the world will be revealed by science.

1. strongly disagree
2. disagree
3. agree
4. strongly agree

112. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

113. By improving industrial and agricultural methods, poverty can be eliminated in the world.

1. strongly disagree
2. disagree
3. agree
4. strongly agree

114. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

115. With increased medical knowledge it should be possible to lengthen the average life span to 100 years or more.

1. strongly disagree
2. disagree
3. agree
4. strongly agree

116. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

117. Someday the deserts will be converted into good farming land by the application of engineering and science.

1. strongly disagree
2. disagree
3. agree
4. strongly agree

118. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

119. Education can only help people develop their natural abilities; it cannot change people in any fundamental way.

1. strongly agree
2. agree
3. disagree
4. strongly disagree

120. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

121. With hard work anyone can succeed.

1. strongly disagree
2. disagree
3. agree
4. strongly agree

122. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

123. Almost every present human problem will be solved in the future.

1. strongly disagree
2. disagree
3. agree
4. strongly agree

124. How sure do you feel about your answer?

1. not sure at all
2. not very sure
3. fairly sure
4. very sure

MENTAL RETARDATION

This section of the questionnaire deals with information about mental retardation. Please circle your answer.

125. Which of the following is a preferred method of educating mentally handicapped children:

1. to give the child work he can do with his hands (handicraft, weaving).
2. to place the child in a vocational training school
3. to make the program practical and less academic
4. to present the same material presented to the average child but allowing more time for practice.

126. In educating the mentally handicapped (IQ 50-75) child, occupational training should begin:

1. upon entering high school
2. the second year of high school
3. the last year of high school
4. when the child enters school

127. The major goal of training the mentally handicapped is:

1. social adequacy
2. academic proficiency
3. occupational adequacy
4. occupational adjustment

128. Normal children reject mentally handicapped children because:

1. of their poor learning ability
2. of unacceptable behavior
3. they are usually dirty and poor
4. they do not "catch on"

129. The emotional needs of mentally handicapped are:

1. stronger than normal children
2. the same as normal children
3. not as strong as normal children
4. nothing to be particularly concerned with

130. The proper placement for the slow learner (IQ 75-90) is in:

1. the regular classroom
2. special class
3. vocational arts
4. regular class until age of 16 and then dropped out of school

131. In school, the slow learner ususally:

1. is given a lot of successful experiences
2. meets with a great many failures
3. is a leader
4. is aggressive

132. In grading the slow learner, the teacher should:

1. be realistic, if the child is a failure, fail him
2. grade him according to his achievement with relation to his ability
3. not be particularly concerned with a grade
4. grade him according to his IQ

133. The studies with regard to changing intelligence of pre-school children indicate that:

1. intellectual change may be accomplished
2. no change can be demonstrated
3. change may take place more readily with older children
4. the IQ can be increased at least 20 points if accelerated training begins early enough

134. The development and organization of a comprehensive educational program for the mentally handicapped is dependent upon:

1. adequate diagnoses
2. proper training facilities
3. a psychiatrist
4. parent-teacher organizations

135. The mentally handicapped are physically:

1. markedly taller
2. markedly shorter
3. heavier
4. about the same as the average child of the same age

136. The mentally handicapped child:

1. looks quite different from other children
2. is in need of an educational program especially designed for his needs and characteristics
3. can never be self-supporting
4. cannot benefit from any educational program

137. The mentally handicapped individual usually becomes:

1. a skilled craftsman
2. a professional person
3. a semi-skilled laborer
4. unemployable

138. The educationally handicapped have:

1. at least average intelligence
2. superior intelligence only
3. always have retarded intelligence
4. may have somewhat retarded, average, or superior intelligence.

139. The mentally handicapped have:

1. markedly inferior motor development
2. superior motor development
3. superior physical development
4. about average motor development

140. The reaction of the public toward the retarded child seems to be:

1. rejecting
2. somewhat understanding but not completely accepting
3. accepting
4. express feelings of acceptance but really feel rejecting

APPENDIX A.2

GERMAN TRANSLATION OF ATTITUDE

BEHAVIOR SCALE: ABS-MR

Bitte helfen Sie uns durch Beantwortung der folgenden Fragen festzustellen, wie andere Leute üblicherweise über Intelligenzbehinderte denken.

Dafür ein Beispiel:

Beispiel 1:

1. Blaue Augen haben Intelligenzbehinderte -
   (1.) seltener als andere Menschen
   2. gleich häufig
   3. häufiger als andere Menschen

Wenn die anderen Leute im allgemeinen der Ansicht sind, daß Intelligenzbehinderte seltener blaue Augen haben als andere Menschen, sollten Sie die Nummer 1 einkreisen.
Das ist in dem oben gegebenen Beispiel bereits geschehen.

Wenn hingegen die anderen Leute im allgemeinen der Ansicht sind, daß Intelligenzbehinderte häufiger blaue Augen haben, sollten Sie die Nummer 3 einkreisen.
Das ist in dem folgenden Beispiel 2 bereits geschehen.

Beispiel 2:

1. Blaue Augen haben Intelligenzbehinderte -
   1. seltener als andere Menschen
   2. gleich häufig
   (3.) häufiger als andere Menschen

Bitte geben Sie außerdem jedesmal an, wie sicher Sie sich Ihrer Antwort sind.
Hätten Sie etwa bei dem folgenden Beispiel die Antwort gleich häufig eingekreist, sollen Sie nun angeben, wie sicher Sie sich Ihrer Antwort sind.
Sind Sie sich Ihrer Antwort sicher, sollen Sie die Nummer 3 einkreisen.
Das ist bei Beispiel 3 bereits geschehen.

Beispiel 3:

1. Blaue Augen haben Intelligenzbehinderte - ↔ 2. Wie sicher sind Sie sich Ihrer Antwort?

1. seltener als andere Menschen	1. nicht sicher
(2.) gleich häufig	2. ziemlich sicher
3. häufiger als andere Menschen	(3.) sicher

Anweisungen zu Teil I:

Kreisen Sie bitte im folgenden jeweils die Nummer vor der Aussage ein, die die Meinung anderer Leute über die Intelligenzbehinderten am besten wiedergibt. Bitte geben Sie außerdem jedesmal an, wie sicher Sie sich Ihrer Antwort sind. In manchen Fällen werden Sie wahrscheinlich ganz sicher sein, in anderen dagegen nicht. Es ist aber wichtig, daß Sie alle Fragen beantworten, auch wenn Sie sich in einzelnen Fällen Ihrer Antwort nicht sicher sind und raten müssen.

Die anderen Leute sind im allgemeinen der Ansicht:

1. Energie und Vitalität sind bei Intelligenzbehinderten –

   1. geringer als bei anderen Menschen
   2. etwa gleich
   3. größer als bei anderen Menschen

2. Wie sicher sind Sie sich Ihrer Antwort?

   1. nicht sicher
   2. ziemlich sicher
   3. sicher

3. Die Fähigkeit, in der Schule mitzukommen, ist bei Intelligenzbehinderten –

   1. geringer als bei anderen Kindern
   2. etwa gleich
   3. größer als bei anderen Kindern

4. Wie sicher sind Sie sich Ihrer Antwort?

   1. nicht sicher
   2. ziemlich sicher
   3. sicher

5. Das Gedächtnis bei Intelligenzbehinderten ist –

   1. schlechter
   2. gleich
   3. besser

6. Wie sicher sind Sie sich Ihrer Antwort?

   1. nicht sicher
   2. ziemlich sicher
   3. sicher

7. Das Interesse an ungewöhnlichen Sexualpraktiken ist bei Intelligenzbehinderten –

   1. stärker
   2. etwa gleich
   3. geringer

8. Wie sicher sind Sie sich Ihrer Antwort?

   1. nicht sicher
   2. ziemlich sicher
   3. sicher

Die anderen Leute sind im allgemeinen der Ansicht:

9. Die Fähigkeit, eine gute Ehe zu führen, ist bei Intelligenzbehinderten –

1. geringer
2. etwa gleich
3. größer

10. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

11. Die Zahl der Kinder ist bei Intelligenzbehinderten –

1. größer als bei anderen
2. etwa gleich groß
3. geringer als bei anderen

12. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

13. Die Treue in der Ehe ist bei Intelligenzbehinderten –

1. geringer
2. etwa gleich
3. größer

14. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

15. Intelligenzbehinderte kümmern sich um ihre Kinder –

1. weniger als andere
2. etwa gleich viel
3. mehr als andere

16. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

17. Die Wahrscheinlichkeit, sich an die Gesetze zu halten, ist bei Intelligenzbehinderten –

1. geringer
2. etwa gleich groß
3. größer

18. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Die anderen Leute sind im allgemeinen der Ansicht:

19. Intelligenzbehinderte arbeiten im allgemeinen - ⟷ 20. Wie sicher sind Sie sich Ihrer Antwort?

1. weniger regelmäßig und zuverlässig
2. etwa gleich regelmäßig und zuverlässig
3. regelmäßiger und zuverlässiger

1. nicht sicher
2. ziemlich sicher
3. sicher

21. Intelligenzbehinderte sind - 22. Wie sicher sind Sie sich Ihrer Antwort?

1. weniger fleißig als andere
2. etwa gleich fleißig
3. fleißiger als andere

1. nicht sicher
2. ziemlich sicher
3. sicher

23. Pläne für die Zukunft machen Intelligenzbehinderte - 24. Wie sicher sind Sie sich Ihrer Antwort?

1. seltener als andere
2. etwa gleich häufig
3. häufiger als andere

1. nicht sicher
2. ziemlich sicher
3. sicher

25. Die Neigung, sich lieber in der Gegenwart zu vergnügen, statt für die Zukunft zu sorgen, ist bei Intelligenzbehinderten - 26. Wie sicher sind Sie sich Ihrer Antwort?

1. stärker ausgeprägt als bei anderen
2. etwa gleich stark ausgeprägt
3. weniger ausgeprägt als bei anderen

1. nicht sicher
2. ziemlich sicher
3. sicher

27. Die Neigung, anderen gegenüber grausam zu sein, ist bei Intelligenzbehinderten im allgemeinen - 28. Wie sicher sind Sie sich Ihrer Antwort?

1. größer
2. etwa gleich groß
3. geringer

1. nicht sicher
2. ziemlich sicher
3. sicher

Die anderen Leute sind im allgemeinen der Ansicht:

29. Intelligenzbehinderte sind sexuell - ⟷ 3o. Wie sicher sind Sie sich Ihrer Antwort?

1. hemmungsloser als andere
2. nicht anders
3. stärker gehemmt als andere

1. nicht sicher
2. ziemlich sicher
3. sicher

31. Unternehmungslust ist bei Intelligenzbehinderten -

1. weniger ausgeprägt als bei anderen
2. etwa gleich stark ausgeprägt
3. stärker ausgeprägt als bei anderen

32. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

33. Die wirtschaftliche Selbständigkeit der Intelligenzbehinderten ist -

1. geringer als bei anderen
2. etwa gleich
3. größer als bei anderen

34. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

35. Intelligenzbehinderte ziehen es vor, -

1. unter ihresgleichen zu bleiben
2. nur mit Normalbegabten zusammenzusein
3. mit allen Leuten gleicherweise zusammenzusein

36. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

37. Bildung und Erziehung sind für Intelligenzbehinderte, verglichen mit anderen, -

1. weniger wichtig
2. von umstrittenem Wert
3. eine wichtige soziale Aufgabe

38. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

39. Gebote und Verbote müssen bei Intelligenzbehinderten -

1. strenger gehandhabt werden
2. etwa gleich streng gehandhabt werden
3. weniger streng gehandhabt werden

4o. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Anweisungen zu Teil II:

Bitte geben Sie im folgenden Abschnitt jeweils an, was andere Leute im allgemeinen von den hier geschilderten Beziehungen zu Intelligenzbehinderten halten.
Bitte geben Sie außerdem jedesmal an, wie sicher Sie sich Ihrer Antwort sind.

Die Meinung der meisten anderen Leute ist folgende:

41. Wenn intelligenzbehinderte Kinder auf dem öffentlichen Spielplatz mit nicht-intelligenzbehinderten Kindern spielen, wird das im allgemeinen –

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

42. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

43. Wenn intelligenzbehinderte Kinder andere, nicht-intelligenzbehinderte Kinder zu Hause besuchen, wird das im allgemeinen –

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

44. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

45. Wenn intelligenzbehinderte Kinder mit anderen, nicht-intelligenzbehinderten Kindern Camping-Fahrten machen, wird das im allgemeinen –

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

46. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

47. Intelligenzbehinderte mit einfachen Aufgaben zu betrauen, da sie nur wenig lernen können –

1. wird im allgemeinen für richtig gehalten
2. ist fragwürdig
3. wird im allgemeinen nicht für richtig gehalten

48. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Die Meinung der meisten anderen Leute ist folgende:

49. Wenn intelligenzbehinderte Kinder bei anderen, nicht-intelligenzbehinderten Kindern zu Mittag essen und umgekehrt, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht



50. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

51. Wenn intelligenzbehinderte Kinder mit anderen, nicht-intelligenzbehinderten Kindern Geburtstage und ähnliches gemeinsam feiern, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

52. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

53. Wenn ein Intelligenzbehinderter eine Arbeitsstelle nur dann erhält, wenn sich kein geeigneter Nicht-Intelligenzbehinderter findet, wird das im allgemeinen -

1. bejaht
2. weder bejaht noch abgelehnt
3. abgelehnt

54. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

55. Wenn Intelligenzbehinderte in der gleichen Gegend wohnen, wie Leute, die nicht intelligenzbehindert sind, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

56. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

57. Wenn ein Intelligenzbehinderter mit einer Person anderen Geschlechts, die nicht intelligenzbehindert ist, ausgeht, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

58. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Die Meinung der meisten anderen Leute ist folgende:

59. Wenn ein Intelligenzbehinderter mit jemandem, der nicht intelligenzbehindert ist, ins Kino geht, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht



60. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

61. Wenn ein Intelligenzbehinderter jemanden heiratet, der nicht intelligenzbehindert ist, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

62. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

63. Wenn intelligenzbehinderte Männer sterilisiert werden, wird das im allgemeinen -

1. bejaht
2. weder bejaht noch abgelehnt
3. abgelehnt

64. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

65. Wenn intelligenzbehinderte Frauen sterilisiert werden, wird das im allgemeinen -

1. bejaht
2. weder bejaht noch abgelehnt
3. abgelehnt

66. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

67. Wenn jemand mit einem Intelligenzbehinderten Freundschaft schließen will, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

68. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Die Meinung der meisten anderen Leute ist folgende:

69. Wenn jemand einem Intelligenzbehinderten ⟷ Sex-Appeal nachsagt, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

70. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

71. Wenn jemand Intelligenzbehinderte für gefährlich hält, wird das im allgemeinen -

1. bejaht
2. weder bejaht noch abgelehnt
3. abgelehnt

72. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

73. Wenn Intelligenzbehinderte eine Bohrmaschine bedienen, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

74. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

75. Wenn Intelligenzbehinderten Geld für ihre persönlichen Ausgaben anvertraut wird, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

76. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

77. Wenn ein Intelligenzbehinderter eine Arbeit tut, mit der er fertig wird, obwohl er kaum sprechen kann, wird das im allgemeinen -

1. abgelehnt
2. weder bejaht noch abgelehnt
3. bejaht

78. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

79. Wenn Intelligenzbehinderte gezwungen werden, ganz allein für sich selbst zu sorgen, wird das im allgemeinen -

1. bejaht
2. weder bejaht noch abgelehnt
3. abgelehnt

80. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher

Anweisungen zu Teil III:

In diesem Abschnitt geht es um richtiges oder moralisch richtiges Verhalten. Bitte geben Sie jeweils an, ob Sie selbst die genannten Verhaltensweisen für richtig oder falsch halten bzw. ob Sie der Ansicht sind, daß Sie sich intelligenzbehinderten Menschen gegenüber so verhalten sollten oder nicht. Außerdem geben Sie bitte wieder an, wie sicher Sie sich Ihrer Antwort sind.

Glauben Sie, daß es im allgemeinen richtig oder falsch ist,

81. wenn ein intelligenzbehindertes Kind an einer Camping-Fahrt mit anderen, nicht-intelligenzbehinderten Kindern teilnimmt?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

82. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

83. wenn ein intelligenzbehindertes Kind mit anderen, nicht-intelligenzbehinderten Kindern zusammen ins Kino geht?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

84. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

85. wenn ein intelligenzbehindertes Kind bei einem nicht-behinderten Kind zum Mittagessen eingeladen wird und umgekehrt?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

86. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

87. wenn ein intelligenzbehindertes Kind an einer Geburtstagsfeier zusammen mit nicht-behinderten Kindern teilnimmt?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

88. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Glauben Sie, daß es im allgemeinen richtig oder falsch ist,

89. wenn der Staat einen Teil der Kosten für die Elementarausbildung der Intelligenzbehinderten übernimmt?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

90. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

91. wenn der Staat alle Kosten für die Elementarausbildung der Intelligenzbehinderten übernimmt?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

92. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

93. wenn der Staat alle Kosten dafür übernimmt, daß Intelligenzbehinderte genau so lange zur Schule gehen wie andere Kinder?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

94. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

95. wenn der Staat einen Teil der Arztkosten übernimmt, soweit sie mit der Behinderung in Zusammenhang stehen?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

96. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

97. wenn der Staat alle Arztkosten übernimmt, soweit sie mit der Behinderung in Zusammenhang stehen?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

98. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

99. wenn der Staat die Intelligenzbehinderten mit Geld für Lebensmittel, Kleidung usw. unterstützt?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

100. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Glauben Sie, daß es im allgemeinen richtig oder falsch ist,

1o1. wenn sich Intelligenzbehinderte bei gesellschaftlichen Veranstaltungen frei unter den Nichtbehinderten bewegen?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

1o2. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

1o3. wenn ein Intelligenzbehinderter mit einer Person anderen Geschlechts, die nicht intelligenzbehindert ist, ausgeht?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

1o4. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

1o5. wenn ein Intelligenzbehinderter mit jemandem, der nicht intelligenzbehindert ist, ins Kino geht?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

1o6. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

1o7. wenn ein Intelligenzbehinderter jemanden heiratet, der nicht intelligenzbehindert ist?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

1o8. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

1o9. wenn ein Intelligenzbehinderter zur Bundeswehr eingezogen wird?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

11o. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

111. wenn besondere Gesetze zum Schutz der Intelligenzbehinderten erlassen werden?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

112. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3 sicher

Glauben Sie, daß es im allgemeinen richtig oder falsch ist,

113. wenn Sondereinrichtungen geschaffen werden, die es Intelligenzbehinderten ermöglichen, sich in der Stadt besser zurechtzufinden?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

114. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

115. wenn die Intelligenzbehinderten sterilisiert werden?

1. im allgemeinen richtig
2. nicht zu entscheiden
3. im allgemeinen falsch

116. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

117. wenn alle intelligenzbehinderten Kinder eigene Schulen besuchen, so daß sie nicht mit anderen Kindern zusammenkommen?

1. im allgemeinen richtig
2. nicht zu entscheiden
3. im allgemeinen falsch

118. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

119. wenn bestimmte Arbeitsplätze für die Intelligenzbehinderten reserviert werden?

1. im allgemeinen falsch
2. nicht zu entscheiden
3. im allgemeinen richtig

120. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Anweisungen zu Teil IV:

In diesem Abschnitt geht es um das Verhalten anderen gegenüber.
Bitte geben Sie jeweils an, wie Sie persönlich sich Intelligenzbehinderten gegenüber verhalten würden.
Anschließend geben Sie bitte wieder an, wie sicher Sie sich Ihrer Antwort sind.

Würden Sie -

121. sich auf einer langen Bahnfahrt neben einen Intelligenzbehinderten setzen? ←——→ 122. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

123. einen Intelligenzbehinderten als Mitarbeiter haben wollen? 124. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

125. einen Intelligenzbehinderten für sich arbeiten lassen? 126. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

127. Tür an Tür oder Haus an Haus mit einem Intelligenzbehinderten wohnen wollen? 128. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

129. einen Intelligenzbehinderten zu einer Party oder Feier bei sich einladen? 130. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

Würden Sie -

131. eine Einladung zum Mittagessen bei einem Intelligenzbehinderten annehmen?

1. nein
2. weiß nicht
3. ja

132. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

133. mit einem/einer Intelligenzbehinderten zusammen ins Kino gehen?

1. nein
2. weiß nicht
3. ja

134. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

135. es Ihrem Sohn oder Ihrer Tochter erlauben, mit einem/einer Intelligenzbehinderten auszugehen?

1. nein
2. weiß nicht
3. ja

136. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

137. mit einem/einer Intelligenzbehinderten zusammen ausgehen?

1. nein
2. weiß nicht
3. ja

138. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

139. es Ihrem Sohn oder Ihrer Tochter erlauben, eine(n) Intelligenzbehinderte(n) zu heiraten?

1. nein
2. weiß nicht
3. ja

14o. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

141. mit einem/einer Intelligenzbehinderten in sexueller Hinsicht glücklich sein können?

1. nein
2. weiß nicht
3. ja

142. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Würden Sie -

143. gern für Intelligenzbehinderte arbeiten? ⟷ 144. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

145. ebenso gern für Intelligenzbehinderte wie für andere Behinderte arbeiten? 146. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

147. gern für Intelligenzbehinderte arbeiten, die zusätzlich psychisch gestört sind? 148. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

149. einen Intelligenzbehinderten einstellen, wenn Sie Arbeitgeber wären? 150. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

151. einen Intelligenzbehinderten in Ihrer Klasse haben wollen, wenn Sie Lehrer wären? 152. Wie sicher sind Sie sich Ihrer Antwort?

1. nein
2. weiß nicht
3. ja

1. nicht sicher
2. ziemlich sicher
3. sicher

153. die Intelligenzbehinderten sterilisieren lassen, wenn sie darüber zu bestimmen hätten? 154. Wie sicher sind Sie sich Ihrer Antwort?

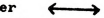
1. ja
2. weiß nicht
3. nein

1. nicht sicher
2. ziemlich sicher
3. sicher

Würden Sie -

155. die Intelligenzbehinderten von der übrigen Bevölkerung absondern, wenn Sie darüber zu bestimmen hätten?

1. ja
2. weiß nicht
3. nein



156. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

157. meinen, daß die Sorge für die Intelligenzbehinderten einen Hinweis auf den sozialen Entwicklungsstand eines Volkes gibt?

1. nein
2. weiß nicht
3. ja

158. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

159. Sonderklassen für Intelligenzbehinderte in Normalschulen einrichten, wenn Sie könnten?

1. nein
2. weiß nicht
3. ja

160. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Anweisungen zu Teil V:

In diesem Abschnitt geht es um Gefühlshaltungen gegenüber Intelligenzbehinderten. Bitte geben Sie jeweils an, welche Gefühle Sie Menschen entgegenbringen, die intelligenzbehindert sind, und zwar im Vergleich zu solchen, die es nicht sind.
Geben Sie bitte außerdem an, wie sicher Sie sich Ihrer Antwort sind.

Welche Gefühle haben Sie Menschen gegenüber, die intelligenzbehindert sind, im Vergleich zu solchen, die es nicht sind?

1. Abneigung ←——→ 2. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr	1. nicht sicher
2. kein Unterschied	2. ziemlich sicher
3. weniger	3. sicher

3. Furcht — 4. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr	1. nicht sicher
2. kein Unterschied	2. ziemlich sicher
3. weniger	3. sicher

5. Grausen — 6. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr	1. nicht sicher
2. kein Unterschied	2. ziemlich sicher
3. weniger	3. sicher

7. Ekel — 8. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr	1. nicht sicher
2. kein Unterschied	2. ziemlich sicher
3. weniger	3. sicher

9. Bestürzung — 10. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr	1. nicht sicher
2. kein Unterschied	2. ziemlich sicher
3. weniger	3. sicher

11. Haß — 12. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr	1. nicht sicher
2. kein Unterschied	2. ziemlich sicher
3. weniger	3. sicher

Welche Gefühle haben Sie Menschen gegenüber, die intelligenzbehindert sind, im Vergleich zu solchen, die es nicht sind?

13. Abscheu ←——→ 14. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr
2. kein Unterschied
3. weniger

1. nicht sicher
2. ziemlich sicher
3. sicher

15. Verachtung 16. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr
2. kein Unterschied
3. weniger

1. nicht sicher
2. ziemlich sicher
3. sicher

17. Widerwillen 18. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr
2. kein Unterschied
3. weniger

1. nicht sicher
2. ziemlich sicher
3. sicher

19. Übelkeit 2o. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr
2. kein Unterschied
3. weniger

1. nicht sicher
2. ziemlich sicher
3. sicher

21. Verwirrung 22. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr
2. kein Unterschied
3. weniger

1. nicht sicher
2. ziemlich sicher
3. sicher

23. Ablehnung 24. Wie sicher sind Sie sich Ihrer Antwort?

1. mehr
2. kein Unterschied
3. weniger

1. nicht sicher
2. ziemlich sicher
3. sicher

25. Ungezwungenheit 26. Wie sicher sind Sie sich Ihrer Antwort?

1. weniger
2. kein Unterschied
3. mehr

1. nicht sicher
2. ziemlich sicher
3. sicher

Welche Gefühle haben Sie Menschen gegenüber, die intelligenzbehindert sind, im Vergleich zu solchen, die es nicht sind?

27. Unruhe ⟷

1. mehr
2. kein Unterschied
3. weniger

28. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

29. Unbehaglichkeit

1. mehr
2. kein Unterschied
3. weniger

3o. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

31. Erleichterung

1. weniger
2. kein Unterschied
3. mehr

32. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

33. Spannung

1. mehr
2. kein Unterschied
3. weniger

34. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

35. Traurigkeit

1. mehr
2. kein Unterschied
3. weniger

36. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

37. Ruhe

1. weniger
2. kein Unterschied
3. mehr

38. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

39. Zufriedenheit

1. weniger
2. kein Unterschied
3. mehr

4o. Wie sicher sind Sie sich Ihrer Antwort?

1. nicht sicher
2. ziemlich sicher
3. sicher

Anweisungen zu Teil VI:

In diesem Abschnitt geht es um die verschiedenen praktischen Erfahrungen, die Sie schon mit Intelligenzbehinderten gemacht haben. Wenn eine Aussage für Sie zutrifft, kreisen Sie bitte das ja ein, wenn sie nicht zutrifft, das nein usw. Geben Sie bitte außerdem an, ob die Erfahrungen für Sie angenehm oder unangenehm waren.

Bisherige Kontakte und Erfahrungen mit Intelligenzbehinderten:

41. Ich habe schon in der Straßenbahn, im Bus, Zug oder Flugzeug neben einem Intelligenzbehinderten gesessen.

1. nein
2. weiß nicht
3. ja

42. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

43. Ich habe schon mit einem Intelligenzbehinderten im Lokal am gleichen Tisch gesessen.

1. nein
2. weiß nicht
3. ja

44. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

45. Ich habe schon mit einem Intelligenzbehinderten in der gleichen Straße oder Gegend gewohnt.

1. nein
2. weiß nicht
3. ja

46. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

47. Ich habe schon mit einem Intelligenzbehinderten am gleichen Arbeitsplatz gearbeitet.

1. nein
2. weiß nicht
3. ja

48. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

Bisherige Kontakte und Erfahrungen mit Intelligenzbehinderten:

49. Ich habe schon einen Intelligenzbehinderten als Arbeitgeber oder Vorgesetzten gehabt. ⟷ 50. Haben Sie das als angenehm oder unangenehm empfunden?

1. nein
2. weiß nicht
3. ja

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

51. Ich habe für Intelligenzbehinderte schon ohne Bezahlung gearbeitet, um ihnen zu helfen.

1. nein
2. weiß nicht
3. ja

52. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

53. Ich habe in meinem Bekanntenkreis einen oder mehrere Intelligenzbehinderte.

1. nein
2. weiß nicht
3. ja

54. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

55. Ich habe einen guten Freund, der intelligenzbehindert ist.

1. nein
2. weiß nicht
3. ja

56. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

57. Ich habe schon Geld, Kleidung usw. für Intelligenzbehinderte gespendet.

1. nein
2. weiß nicht
3. ja

58. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

59. Ich habe ein intelligenzbehindertes Kind.

1. nein
2. weiß nicht
3. ja

60. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

Bisherige Kontakte und Erfahrungen mit Intelligenzbehinderten:

61. Ich habe eine(n) intelligenzbehinderte(n) Bruder oder Schwester.

1. nein
2. weiß nicht
3. ja

62. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

63. Mein bester Freund ist intelligenzbehindert.

1. nein
2. weiß nicht
3. ja

64. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

65. Ich habe schon gegen Bezahlung für Intelligenzbehinderte gearbeitet.

1. ja
2. weiß nicht
3. nein

66. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

67. Meine Kinder haben schon mit intelligenzbehinderten Kindern gespielt.

1. nein
2. weiß nicht
3. ja

68. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

69. Meine Kinder sind mit intelligenzbehinderten Kindern in die gleiche Schule gegangen.

1. nein
2. weiß nicht
3. ja

70. Haben Sie das als angenehm oder unangenehm empfunden?

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

Bisherige Kontakte und Erfahrungen mit Intelligenzbehinderten:

71. Ich habe mich schon dafür eingesetzt, daß Intelligenzbehinderte eine bessere Beschulung und Ausbildung erhalten. ⟷ 72. Haben Sie das als angenehm oder unangenehm empfunden?

1. nein
2. weiß nicht
3. ja

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

73. Ich habe mich schon dafür eingesetzt, daß Intelligenzbehinderte geeignete Arbeitsplätze erhalten. 74. Haben Sie das als angenehm oder unangenehm empfunden?

1. nein
2. weiß nicht
3. ja

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

75. Ich habe schon erfreuliche sexuelle Kontakte mit Intelligenzbehinderten gehabt. 76. Haben Sie das als angenehm oder unangenehm empfunden?

1. nein
2. weiß nicht
3. ja

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

77. Ich habe mich mit dem Problem der Intelligenzbehinderten durch Lektüre usw. schon näher beschäftigt. 78. Haben Sie das als angenehm oder unangenehm empfunden?

1. nein
2. ja

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

79. Ich habe schon als Lehrer mit Intelligenzbehinderten zu tun gehabt. 80. Haben Sie das als angenehm oder unangenehm empfunden.

1. nein
2. ja

1. entfällt, da keine entsprechenden Erfahrungen vorliegen
2. unangenehm
3. teils-teils
4. angenehm

In den folgenden Fragen geht es um unterschiedliche Dinge. Für den Zweck der Untersuchung ist es aber wichtig, daß Sie alle gestellten Fragen beantworten.

Einige Fragen betreffen Ihre Person. Da die Antworten anonym erfolgen und streng vertraulich behandelt werden, können Sie offen antworten, ohne befürchten zu müssen, später identifiziert zu werden. Für die Untersuchung ist es wichtig, daß Sie alle Fragen beantworten.

Lesen Sie bitte die einzelnen Fragen genau durch und lassen Sie keine Frage aus. Die zutreffende Antwort kreisen Sie bitte jedesmal ein.

81. Geschlecht?

1. weiblich
2. männlich

82. Alter?

1. 2o Jahre und darunter
2. 21 - 3o Jahre
3. 31 - 4o Jahre
4. 41 - 5o Jahre
5. über 5o Jahre

83. Nachfolgend werden verschiedene Bildungseinrichtungen aufgezählt. Mit welcher davon haben Sie die meisten Erfahrungen gesammelt oder über welche davon sind Sie am besten im Bilde? (Diese Frage bezieht sich nicht auf Ihre eigene Schulbildung, sondern auf Ihre nach der Schulentlassung gemachten Erfahrungen.)
Bitte geben Sie nur e i n e A n t w o r t .

1. ich habe keine besonderen Erfahrungen und Kenntnisse auf diesem Gebiet
2. Volksschule
3. Realschule und Gymnasium
4. Hochschule und Universität
5. andere Bildungseinrichtungen (z.B. Sonderschule oder Berufsschule)

84. Familienstand?

1. verheiratet
2. ledig
3. geschieden
4. verwitwet
5. getrennt lebend

85. Konfession?

1. ich möchte diese Frage nicht beantworten
2. katholisch
3. evangelisch
4. sonstige
5. ohne

86. Wie wichtig ist Ihnen die Religion im täglichen Leben?

1. ich möchte diese Frage nicht beantworten
2. ohne Bedeutung
3. nicht besonders wichtig
4. recht wichtig
5. sehr wichtig

87. Welchen Schul- oder Studienabschluß haben Sie erreicht?

1. Volksschulabschluß
2. "Mittlere Reife"
3. Abitur
4. Hochschul- oder Universitätsbesuch ohne Abschlußexamen
5. Hochschul- oder Universitätsbesuch mit Abschlußexamen

88. Einige Menschen sind in ihren Ansichten und Gewohnheiten beständiger als andere. Wie würden Sie sich selbst einstufen?

1. es fällt mir sehr schwer, mich umzustellen
2. es fällt mir etwas schwer, mich umzustellen
3. es fällt mir verhältnismäßig leicht, mich umzustellen
4. es fällt mir sehr leicht, mich umzustellen

89. Manche Leute sind der Ansicht, daß man bei der Kindererziehung, wenn irgend möglich, neue Wege und Methoden erproben sollte; andere dagegen vertreten die Meinung, daß die Erprobung neuer Methoden gefährlich sei. Wie stehen Sie zu der folgenden Aussage?

"Wo immer es möglich ist, sollten neue Methoden der Kindererziehung erprobt werden."

1. ich bin vollkommen anderer Ansicht
2. ich bin etwas anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin völlig gleicher Ansicht

90. Über Familienplanung durch Geburtenkontrolle ist in letzter Zeit viel diskutiert worden. Tut ein Ehepaar, das Geburtenkontrolle praktiziert, damit Ihrer Ansicht nach etwas Gutes oder etwas Schlechtes, etwas Richtiges oder etwas Verkehrtes?

1. Geburtenkontrolle ist immer verkehrt
2. Geburtenkontrolle ist im allgemeinen verkehrt
3. Geburtenkontrolle ist wahrscheinlich richtig
4. Geburtenkontrolle ist immer richtig

91. Die Ansichten über Automation und andere moderne Produktionsmethoden gehen auseinander. Wie stehen Sie zu folgender Aussage?

"Die Automation und andere moderne Verfahrensweisen in Produktion, Vertrieb und Verwaltung sollten gefördert werden, weil dadurch neue Arbeitsplätze entstehen und der Lebensstandard steigt."

1. ich bin vollkommen anderer Ansicht
2. ich bin etwas anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin völlig gleicher Ansicht

92. Die Leitung einer Gemeinde- oder Stadtverwaltung sowie sonstiger öffentlicher Einrichtungen ist sehr wichtig. Wie stehen Sie zu der folgenden Aussage?

"Politische Beamte sollten regelmäßig abgelöst werden, auch wenn sie ihre Sache gut machen."

1. ich bin vollkommen anderer Ansicht
2. ich bin etwas anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin völlig gleicher Ansicht

93. Manche Leute sind der Meinung, daß die Länder und Gemeinden mehr Geld für das Schul- und Bildungswesen ausgeben sollten, selbst wenn dadurch die Steuern erhöht werden müßten. Wie denken Sie darüber?

1. ich bin vollkommen anderer Ansicht
2. ich bin etwas anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin völlig gleicher Ansicht

94. Manche Leute sind der Ansicht, daß die Bundesregierung mehr Geld für das Schul- und Bildungswesen ausgeben sollte, selbst wenn dadurch die Steuern erhöht werden müßten. Wie denken Sie darüber?

1. ich bin vollkommen anderer Ansicht
2. ich bin etwas anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin völlig gleicher Ansicht

95. Über Bildungsplanung und -lenkung gibt es ganz verschiedene Ansichten. Kreisen Sie bitte diejenige ein, die Ihrer Ansicht am nächsten kommt.

1. Bildungsplanung und -lenkung ist vor allem eine Aufgabe der Kirchen
2. Bildungsplanung und -lenkung ist ausschließlich Sache der Eltern
3. Bildungsplanung und -lenkung ist vor allem Aufgabe der Gemeinden und überörtlichen Schulträger
4. Bildungsplanung und -lenkung ist vor allem Aufgabe des Staates

96. Wie weit richten Sie sich nach den Gesetzen und Vorschriften Ihrer Religionsgemeinschaft?

1. ich möchte diese Frage nicht beantworten
2. ich gehöre keiner Religionsgemeinschaft an
3. manchmal
4. gewöhnlich
5. fast immer

97. Es fällt mir leichter, Anweisungen zu befolgen als selbst zu entscheiden.

1. das ist vollkommen richtig
2. das ist weitgehend richtig
3. das ist nicht ganz falsch
4. das ist vollkommen falsch

In den folgenden Fragen geht es um Ihre persönlichen Erfahrungen mit verschiedenen Gruppen von Behinderten.

Vielleicht hatten Sie schon häufiger Umgang mit solchen Menschen und haben sich ausführlich mit ihnen beschäftigt. Es kann aber auch sein, daß Sie bisher nur wenig oder gar nichts mit ihnen zu tun gehabt und sich darum noch keine näheren Gedanken über sie gemacht haben.

98. Bitte geben Sie von den nachfolgend genannten Gruppen von Behinderten diejenige an, mit der Sie bisher am meisten zu tun gehabt haben.

1. Blinde und Sehbehinderte
2. Taube, Schwerhörige und Sprachbehinderte
3. Spastiker und andere Körperbehinderte
4. Intelligenzbehinderte
5. Sozial- und Gemütsgestörte

Die folgenden fünf Fragen (Nr. 99 - 1o3) beziehen sich auf die soeben von Ihnen genannte Gruppe.

99. Die folgenden Fragen haben etwas mit der Art der Erfahrung zu tun, die Sie mit der oben angegebenen Gruppe von Behinderten gemacht haben. Sollte mehr als eine der vorgegebenen Antworten für Sie zutreffen, dann kreisen Sie bitte die Antwort mit der höchsten davorstehenden Ziffer ein.

1. ich habe mich über Behinderte durch entsprechende Lektüre, Vorträge, Filmvorführungen oder eigene Beobachtungen näher informiert
2. ein(e) Freund(in) oder Verwandte(r) von mir ist behindert
3. ich habe als Lehrer, Erzieher, Praktikant usw. schon bei Behinderten gearbeitet
4. ich bin selbst ziemlich schwer behindert

1oo. Wenn Sie alle Gelegenheiten zusammenzählen, bei denen Sie schon mit Personen der in Frage 98 von Ihnen genannten Behindertengruppe gesprochen, gearbeitet oder sonstwie zu tun gehabt haben, wie oft ist das etwa gewesen?

1. weniger als 1omal
2. zwischen 1o- und 5omal
3. zwischen 5o- und 1oomal
4. zwischen 1oo- und 5oomal
5. über 5oomal

1o1. Wie leicht hätten Sie im allgemeinen den persönlichen Kontakt mit diesen Behinderten v e r m e i d e n können?

1. ich hätte den persönlichen Kontakt auf keine Weise vermeiden können
2. ich hätte den persönlichen Kontakt im allgemeinen nur mit größten Umständen und Schwierigkeiten vermeiden können
3. ich hätte den persönlichen Kontakt im allgemeinen mit beträchtlichen Schwierigkeiten vermeiden können
4. ich hätte den persönlichen Kontakt im allgemeinen vermeiden können, wenngleich mit einigen Umständen
5. ich hätte den persönlichen Kontakt im allgemeinen ohne jede Schwierigkeit und ohne alle Umstände vermeiden können.

1o2. Hatte Ihr Umgang mit der genannten Gruppe von Behinderten irgendwelche äußeren Gründe, etwa die Notwenigkeit, Geld zu verdienen, ein für Ihre Ausbildung erforderliches Praktikumszeugnis zu erhalten oder ähnliches?

1. nein, ich habe dafür niemals Geld, ein benötigtes Praktikumszeugnis oder irgendwelche sonstigen Vorteile erhalten
2. ja, ich wurde für meine Arbeit mit den Behinderten bezahlt
3. ja, ich habe ein benötigtes Praktikumszeugnis oder ähnliches erhalten
4. ja, ich habe für meine Tätigkeit sowohl Geld als auch ein benötigtes Praktikumszeugnis oder ähnliches erhalten

1o3. Wenn Sie bereits gegen Bezahlung mit Behinderten gearbeitet haben, dann geben Sie bitte an, wieviel Prozent Ihres Einkommens Sie während dieser Zeit dafür erhalten haben.

1. entfällt, da bisher noch nicht gegen Bezahlung mit Behinderten gearbeitet
2. bis zu 25%
3. zwischen 26 und 5o%
4. zwischen 51 und 75%
5. über 76%

Sie

1o4. Wenn jemals aus äußeren Gründen, z.B. gegen Bezahlung, für irgendeine Gruppe von Behinderten gearbeitet haben, welche Möglichkeiten hatten oder haben Sie, statt dessen auch eine andere Arbeit zu übernehmen?

1. entfällt, da bisher noch nicht für Behinderte gearbeitet
2. es gab (gibt) für mich keine andere Arbeitsmöglichkeit
3. andere sich bietende Arbeitsmöglichkeiten wären für mich überhaupt nicht akzeptabel(gewesen)
4. andere sich bietende Arbeitsmöglichkeiten wären für mich weniger akzeptabel(gewesen)
5. auch andere sich bietende Arbeitsmöglichkeiten wären für mich durchaus akzeptabel(gewesen)

1o5. Haben Sie schon mit Intelligenzbehinderten zu tun gehabt? Wenn Sie alle Gelegenheiten zusammenzählen, bei denen Sie schon mit Intelligenzbehinderten gesprochen, gearbeitet oder sonstwie zu tun gehabt haben, wie oft ist das etwa gewesen?

1. weniger als 1omal
2. zwischen 1o- und 5omal
3. zwischen 5o- und 1oomal
4. zwischen 1oo- und 5oomal
5. über 5oomal

1o6. Wie stehen Sie im allgemeinen zu den Erfahrungen, die Sie mit Intelligenzbehinderten gemacht haben?

1. entfällt, da ich keine Erfahrungen mit Intelligenzbehinderten habe
2. ich habe sie ausgesprochen ungern gemacht
3. ich habe sie nicht sehr gern gemacht
4. ich habe sie nicht ungern gemacht
5. ich habe sie sehr gern gemacht

In den folgenden Fragen geht es um Ihre Meinung und Stellungnahme zu verschiedenen Problemen. Bitte kreisen Sie jeweils die Antwort ein, die Ihrer Ansicht am nächsten kommt.

107. Es sollte möglich sein, Kriege ein- ⟷ für allemal zu vermeiden.

1. ich bin vollkommen anderer Ansicht
2. ich bin anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin vollkommen gleicher Ansicht

108. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

109. Erfolg im Leben hängt weitgehend vom Schicksal ab oder vom Glück, das einer hat.

1. ich bin vollkommen gleicher Ansicht
2. ich bin ähnlicher Ansicht
3. ich bin anderer Ansicht
4. ich bin vollkommen anderer Ansicht

110. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

111. Eines Tages werden die WissenschaftIer fast alle Welträtsel gelöst haben.

1. ich bin vollkommen anderer Ansicht
2. ich bin anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin vollkommen gleicher Ansicht

112. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

113. Durch eine weitere Verbesserung der Produktionsmethoden von Landwirtschaft und Industrie kann die Armut in der Welt beseitigt werden.

1. ich bin vollkommen anderer Ansicht
2. ich bin anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin vollkommen gleicher Ansicht

114. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

115. Wenn die medizinische Wissenschaft weitere Fortschritte macht, wird die durchschnittliche Lebenserwartung des Menschen auf 100 und mehr Jahre steigen.

1. ich bin vollkommen anderer Ansicht
2. ich bin anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin vollkommen gleicher Ansicht

116. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

117. Wissenschaftler und Ingenieure werden eines Tages die Wüsten der Erde in fruchtbares Ackerland verwandeln.

1. ich bin vollkommen anderer Ansicht
2. ich bin anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin vollkommen gleicher Ansicht

←——→

118. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

119. Bildung und Erziehung können dem Menschen nur helfen, seine natürlichen Anlagen zu entwickeln; sie können ihn nicht grundlegend ändern.

1. ich bin vollkommen gleicher Ansicht
2. ich bin ähnlicher Ansicht
3. ich bin anderer Ansicht
4. ich bin vollkommen anderer Ansicht

120. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

121. Jeder hat Erfolg, wenn er nur tüchtig arbeitet.

1. ich bin vollkommen anderer Ansicht
2. ich bin anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin vollkommen gleicher Ansicht

122. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

123. Fast jedes menschliche Problem, das uns heute beschäftigt, wird einmal gelöst werden.

1. ich bin vollkommen anderer Ansicht
2. ich bin anderer Ansicht
3. ich bin ähnlicher Ansicht
4. ich bin vollkommen gleicher Ansicht

124. Wie sicher sind Sie sich Ihrer Antwort?

1. gar nicht sicher
2. nicht sehr sicher
3. ziemlich sicher
4. sehr sicher

In den folgenden Fragen geht es um Informationen über Intelligenzbehinderte. Bitte kreisen Sie jeweils Ihre Antwort ein.

125. Welches ist die bevorzugte Methode bei der Bildung und Erziehung lernbehinderter Kinder?

1. den Kindern Arbeiten zu geben, die sie mit den Händen tun können (Basteln, Weben usw.)
2. die Kinder in beschützende Werkstätten zu schicken
3. den Unterricht möglichst anschaulich und nicht zu theoretisch zu gestalten
4. den Kindern den gleiche Lehrstoff zu vermitteln wie den durchschnittlich begabten Kindern, ihnen aber mehr Zeit zum intensiven Üben zu lassen

126. Bei der Bildung und Erziehung geistigbehinderter Kinder mit einem Intelligenzquotienten zwischen 4o und 6o sollte die Berufsausbildung –

1. mit 1o Jahren beginnen
2. mit 15 Jahren beginnen
3. mit 17 Jahren beginnen
4. bereits beginnen, wenn das Kind eingeschult wird

127. Das Hauptziel der Erziehung Geistigbehinderter ist es, –

1. sie zu einem angemessenen Sozialverhalten zu führen
2. sie zu guten Schulleistungen zu bringen
3. sie zu einem angemessenen Arbeitsverhalten zu führen
4. sie beruflich erfolgreich einzugliedern

128. Normale Kinder lehnen intelligenzbehinderte Kinder ab, weil sie –

1. so schlecht lernen
2. häufig ein schlechtes Benehmen zeigen
3. häufig schmutzig und arm sind
4. eine "lange Leitung" haben

129. Die Gefühlsbedürfnisse der intelligenzbehinderten Kinder sind –

1. stärker als die der anderen Kinder
2. die gleichen wie bei anderen Kindern
3. schwächer als die der anderen Kinder
4. etwas, auf das es nicht so ankommt

13o. Ein lernbehindertes Kind mit einem Intelligenzquotienten zwischen 70 und 85 ist am besten aufgehoben –

1. in einer Sonderschulklasse
2. in einer beschützenden Werkstätte
3. in der Volksschule und später in einer Tätigkeit als Hilfsarbeiter
4. in einer regulären Volksschulklasse und später in einer Lehre

131. Leicht Lernbehinderte –

1. haben in der Schule im allgemeinen zahlreiche Erfolgserlebnisse
2. haben in der Schule im allgemeinen zahlreiche Mißerfolgserlebnisse
3. sind in der Schule im allgemeinen die Anführer
4. sind in der Schule im allgemeinen streitsüchtig und aggressiv

132. Ein Kind, das Schwierigkeiten beim Lernen hat, sollte der Lehrer –

1. entsprechend den gezeigten Leistungen zensieren, ohne dabei die Begabung mit zu berücksichtigen
2. entsprechend den gezeigten Leistungen zensieren, aber die Begabung dabei mit berücksichtigen
3. entsprechend seiner Begabung zensieren, ohne dabei die gezeigten Leistungen mit zu berücksichtigen
4. überhaupt nicht zensieren

133. Untersuchungen über die Intelligenz bei Kindern im vorschulpflichtigen Alter haben gezeigt, daß –

1. die Intelligenz sich ändern kann
2. die Intelligenz konstant bleibt
3. eine Intelligenzsteigerung eher bei älteren Kindern zu erwarten ist als bei jüngeren
4. der Intelligenzquotient um mindestens 2o Punkte gesteigert werden kann, wenn entsprechende Fördermaßnahmen früh genug einsetzen

134. Die Entwicklung und Durchführung eines umfassenden Bildungsprogramms für intelligenzbehinderte Kinder ist abhängig –

1. von der richtigen Diagnose dieser Kinder
2. von geeigneten Ausbildungsstätten
3. der Mitarbeit eines Psychiaters
4. von den Elternorganisationen und Lehrerverbänden

135. Intelligenzbehinderte Kinder sind körperlich –

1. erheblich größer als andere Kinder
2. erheblich kleiner als andere Kinder
3. dicker als andere Kinder
4. wie andere Kinder gleichen Alters

136. Das intelligenzbehinderte Kind –

1. sieht ganz anders aus als andere Kinder
2. braucht einen Lehrstoff, der genau auf seine Eigenheiten und Bedürfnisse zugeschnitten ist
3. wird sich später seinen Lebensunterhalt nicht allein verdienen und nicht selbst für sich sorgen können
4. kann von keiner Art Unterricht profitieren

137. Intelligenzbehinderte Kinder werden später meist –

1. geschickte Handwerker
2. Landarbeiter
3. angelernte Arbeiter
4. Arbeitslose

138. Erziehungsschwierige Kinder –

1. haben eine mindestens duchschnittliche Intelligenz
2. haben ausnahmslos eine überdurchschnittliche Intelligenz
3. haben ausnahmslos eine unterdurchschnittliche Intelligenz
4. können sowohl einen Intelligenzrückstand wie eine durchschnittliche oder überdurchschnittliche Intelligenz haben

139. Intelligenzbehinderte Kinder haben im allgemeinen –

1. ausgesprochen starke motorische Entwicklungsrückstände
2. eine besonders gut entwickelte Motorik
3. einen besonders guten körperlichen Entwicklungsstand
4. den gleichen oder annähernd gleichen motorischen Entwicklungsstand wie andere Kinder

140. Die Haltung der Öffentlichkeit gegenüber einem Kind mit Entwicklungsrückständen ist im allgemeinen –

1. bejahend und akzeptierend
2. nach außen hin bejahend und akzeptierend, in Wirklichkeit aber ablehnend
3. eher ablehnend als bejahend
4. ablehnend

141. Über welche Intelligenzbehinderten wissen Sie am besten Bescheid?

1. Lernbehinderte
2. Geistigbehinderte
3. Bildungsunfähige
4. Lernbehinderte und Geistigbehinderte
5. über alle drei Gruppen gleichermaßen

142. Haben Sie ein Kind, das eine Sonderschule für Geistigbehinderte besucht, und wenn ja, seit wann ist das der Fall?

1. nein, ich habe kein solches Kind
2. ja, aber es besucht noch nicht die Schule
3. ja, es besucht die Schule seit weniger als zwölf Monaten
4. ja, es besucht die Schule seit 1 - 2 Jahren
5. ja, es besucht die Schule seit mehr als 2 Jahren

143. Haben Sie ein Kind, das eine Sonderschule für Lernbehinderte besucht?

1. nein, ich habe kein solches Kind
2. ja, aber es besucht noch nicht die Schule
3. ja, es besucht die Schule seit weniger als zwölf Monaten
4. ja, es besucht die Schule seit 1 - 2 Jahren
5. ja, es besucht die Schule seit mehr als 2 Jahren

APPENDIX B

SCORING PROCEDURE AND RATIONALE FOR COMBINING ABS-MR CONTENT-INTENSITY SCORES

SCORING PROCEDURE

Combined Content-Intensity Scoring Procedure for ABS-MR Levels 1-5

Content Alternatives	Intensity Alternatives
0 - no response	0 - no response
1 - negative attitude	1 - weak intensity
2 - neutral attitude	2 - medium intensity
3 - positive attitude	3 - strong intensity

Combined Scores

Content	Intensity	Combined	Rationale
0	1	0	Deleted from analysis because attitude direction was indeterminable
0	2	0	
0	3	0	
1	0	2	Intensity error assumed and neutral intensity score of 2 assigned
2	0	5	
3	0	8	
1	3	1	Strong negative attitude
1	2	2	Medium negative attitude
1	1	3	Weak negative attitude
2	1	4	Weak neutral attitude
2	2	5	Medium neutral attitude
2	3	6	Strong neutral attitude
3	1	7	Weak positive attitude
3	2	8	Medium positive attitude
3	3	9	Strong positive attitude

Combined Content-Intensity Scoring Procedure for ABS-MR Level 6

"Content" Alternatives

0 - no response
1 - never have had this experience
2 - uncertain whether have had experience
3 - yes, have had this experience

"Intensity" Alternatives

0 - no response
1 - no such experience
2 - experience was unpleasant
3 - experience was in-between
4 - experience was pleasant

Combined Scores

Content	Intensity	Combined	Rationale
0	1	0	Deleted from analysis because attitude direction was indeterminable
0	2	0	
0	3	0	
0	4	0	
1	0	2	Intensity error assumed and neutral intensity score of 3 assigned
2	0	5	
3	0	8	
1	4	1*	Pleasant to have had no experience
1	1	2	No experience
1	3	2*	In-between to have had no experience
1	2	3*	Unpleasant to have had no experience
2	2	4	Uncertain but unpleasant experience
2	3	5	Uncertain but in-between experience
2	1	5*	Unlikely to occur - see footnote
2	4	6	Uncertain but pleasant experience
3	2	7	Definite experience but unpleasant
3	3	8	Definite experience and in-between
3	1	8*	Unlikely to occur - see footnote
3	4	9	Definite pleasurable experience

*It will be noted that the scoring procedure is not as logically sequential on level 6 as on levels 1-5. The difficulty arises from the additional "intensity" alternative on level 6 not found on levels 1-5 and from the fact that the analyses were all programmed on the basis of the scoring procedure used on levels 1-5. Because of difficulties encountered in changing entire computer programs to adjust for the additional intensity variable on level 6, it was decided to "program in" the fourth intensity alternative to the already existing programs and the scoring procedure shown above for level 6 is the result of this decision. The combinations with asterisks above are extremely unlikely to occur other than through chance error because of the inherent logical contradictions in these combinations. It will be noted that the remaining combinations maintain the same negative-to-positive direction and range (1-9) as the scores on levels 1-5. Thus, the scoring system for level 6 represents a compromise between the ideal and the practical.

APPENDIX C

CODE BOOK SPECIAL INSTRUCTIONS FOR GERMANY

CODE BOOK

GERMANY (202) ABS-MR

(Special Instructions) 1 of 4

Col.[1]	Scale-Item	Item Detail	Code	
		Card 1		
3, 4	Face Sheet	Administration Group	01	Spec Ed (cert.) Ruhr College
			02	Spec Ed (non-cert) Ruhr College
			03	Reg. El Ed (cert) Ruhr College
			04	Reg. El Ed (non-cert) Ruhr College
			05	Parents-Retarded Max Wittmann School
			06	Parents-Retarded Max Wittmann School (waiting list)
			07	Teachers of M.R.
			08	Parents-Normal
			09	Manager-Exec.
13	ABS-MR Q85	Religion (Affiliation)	1.	Refuse[2]
			2.	Catholic
			3.	Protestant
			4.	Other
			5.	None
15	ABS-MR Q87	Education (Amount)	1.	8 years[2]
			2.	9-12 years
			3.	13 years
			4.	Some University
			5.	Degree

[1]The card col. designations refer to the location in the Code Book scoring instructions for the United States version of the ABS-MR, available from John F. Jordan, College of Education, Michigan State University.

[2]Item changed to attempt concept equivalence in Germany.

CODE BOOK

GERMANY (202) ABS-MR

(Special Instructions) 2 of 4

Col.	Scale-Item	Item Detail	Code
		Card 2	
36	Scale II Q49	Public Playground[2]	1. Not Approved 2. Undecided 3. Approved
44	Scale II Q49	Having Dinner[2]	1. Not Approved 2. Undecided 3. Approved
		Card 3	
40	Scale III Q85	Having Dinner[2]	1. Wrong 2. Undecided 3. Right
50	Scale IV Q135	Progeny Date[3]	1. No 2. Don't Know 3. Yes
52	Scale IV Q137	Self Date[3]	1. No 2. Don't Know 3. Yes
		Card 5	
70	Scale V Q36	Sadness[2]	1. Not Sure 2. Fairly Sure 3. Sure
		Card 6	
50	Scale VI Q55	A Good Friend[2]	1. No 2. Don't Know 3. Yes

[2]Item changed to attempt concept equivalence in Germany.

[3]Items 135 and 137 reversed in German version.

CODE BOOK

GERMANY (202) ABS-MR

(Special Instructions) 3 of 4

Col.	Scale-Item	Item Detail	Code
		Card 6	
54	Scale VI Q55	Child Similar[2]	1. No 2. Don't Know 3. Yes
57	Scale VI Q62	Sibling Similar[2]	1. No 2. Don't Know 3. Yes
		Card 7	
55	MR Q126	Occup. Training MR (IQ 40-60)	1. 10 years of age[2] 2. 15 years of age 3. 17 years of age *4. Beginning of School
59	MR Q130	Slow Learner Placement (IQ 70-85)	*1. Special School Class[2] 2. Sheltered Workshop 3. Reg. School & Employ as Labor 4. Reg. School & Later a Trade
61	MR Q132	Slow Learner (Grades)	1. According to Performance[2] *2. Performance & Ability 3. Ability Only 4. Don't Grade
66	MR Q137	MR Becomes	1. Craftsman[2] 2. Farmworker *3. Semi Skilled 4. Unemployed

[2]Item changed to attempt concept equivalence in Germany.

*Correct answer.

CODE BOOK

GERMANY (202) ABS-MR

(Special Instructions) 4 of 4

Col.	Scale-Item	Item Detail	Code	
		Card 7		
69	MR Q140	Public Reaction MR	1.	Accepting[2]
			*2.	Covert Rejection
			3.	More Rejecting than Accepting
			4.	Rejecting
73	MR-KS[4] G Supplement Q141	Type MR (Most Knowledge)	1.	Mild
			2.	Moderate
			3.	Severe
			4.	Mild & Moderate
			5.	All Three
74	MR-KS[4] G Supplement Q142	Moderately Retarded Child (Time in School)	1.	No Such Child
			2.	Not Yet in School
			3.	Less Than 1 Year
			4.	1-2 Years
			5.	More Than 2 Years
75	MR-KS[4] G Supplement Q143	Mildly Retarded Child (Time in School)	1.	No Such Child
			2.	Not Yet in School
			3.	Less Than 1 Year
			4.	1-2 Years
			5.	More Than 2 Years

[2]Item changed to attempt concept equivalence in Germany.

[4]Item 141-143 were added for the German study.

*Correct answer.

APPENDIX D

STATISTICAL MATERIAL

TABLE 29.--N's, means, and standard deviations for German sample groups on 22 independent variables.

Variable[1]	ST[2]			PR[3]			RT[4]			ME[5]			PN[6]		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Value															
Efficacy-Content	148	24.1	3.0	144	24.8	2.9	74	23.3	2.9	83	24.3	3.5	70	25.7	3.4
Efficacy-Intensity	146	29.3	3.5	144	29.2	3.5	74	28.9	3.3	83	29.9	2.9	70	29.3	4.3
MR Knowledge	148	3.2	1.2	138	2.5	1.2	73	3.2	1.2	80	2.9	1.1	69	2.7	1.1
Contact															
HP-Amount	147	3.0	.3	134	1.5	.6	73	2.3	.9	81	1.4	.6	48	1.5	.6
HP-Avoidance	148	4.7	.5	138	3.9	1.4	74	2.8	1.6	80	2.7	1.5	66	2.2	1.4
HP-Income	146	3.1	1.0	133	1.1	.4	74	1.4	.8	82	1.0	.2	67	1.0	.3
HP-Alternatives	148	4.6	1.1	131	1.0	.4	73	1.8	1.5	82	1.0	.2	70	1.1	.5
MR-Amount	148	4.4	1.0	137	1.2	.8	74	1.8	1.3	83	1.1	.8	70	1.3	.9
MR-Enjoyment	147	4.7	.6	135	3.8	1.6	74	2.8	1.6	83	1.9	1.3	70	1.4	.8
Demographic															
Age	148	3.0	1.0	144	3.6	1.0	74	2.6	1.0	83	2.6	.7	70	2.6	.7
Education-Amount	147	4.9	.4	143	1.4	.9	74	4.9	.3	83	3.0	--	69	1.1	.6
Relig.-Importance	148	3.3	1.3	144	3.5	1.2	74	3.1	1.4	83	2.9	.8	70	3.1	.9
Relig.-Adherence	146	2.6	.7	144	2.7	.7	74	2.6	.6	83	3.0	.9	70	2.8	.6
Change Orientation															
Self Change	148	2.7	.6	144	2.8	.8	74	2.7	.7	83	2.8	.8	70	2.8	.8
Child Rearing	147	3.2	.7	144	3.1	.9	74	3.2	.7	83	3.1	.7	70	3.1	.9
Birth Control	148	3.6	.6	144	3.5	.6	73	3.6	.6	83	3.7	.5	70	3.7	.6
Automation	148	3.1	.8	144	3.4	.8	74	3.1	.8	83	3.4	.7	70	3.2	1.0
Political Leadership	148	2.4	.9	144	2.8	1.1	74	2.4	1.0	83	2.5	1.0	70	3.0	1.1
Rule Adherence	148	3.3	.7	142	2.8	1.1	74	3.3	.7	83	3.6	.5	70	2.5	1.1
Ed. Aid & Planning															
Local Aid	148	3.3	.8	143	3.1	.9	74	3.3	.7	83	3.4	.8	70	2.9	1.1
Federal Aid	148	3.3	.8	144	3.1	.9	73	3.2	.7	83	3.4	.8	70	2.8	1.1
Educat. Planning	148	3.7	.6	143	3.5	.8	74	3.7	.5	82	3.7	.7	68	3.1	1.0

[1]Variables are described in Chapter III.

[2]Special Education Teachers.

[3]Parents of Mentally Retarded.

[4]Regular Teachers.

[5]Manager-Executives.

[6]Parents of Non-Retarded.

TABLE 30.--Q^2's for obtained and empirically ordered matrices on six level ABS-MR content-only scores for German samples.

148 Special Teachers[1]

		1	2	3	4	5	6
	1	---			Q^2 = .841		
	2	.41	---				
Obtained	3	-.06	.08	---			
Matrices	4	.06	.05	.36	---		
	5	.04	-.05	.15	.07	---	
	6	-.10	-.20	.22	.27	.18	---
	1	---			Q^2 = .929		
	2	.41	---				
Ordered	3	-.10	-.20	---			
Matrices	4	-.06	-.05	.27	---		
	5	.06	.08	.22	.36	---	
	6	.04	.05	.18	.07	.15	---

74 Regular Teachers[2]

		1	2	3	4	5	6
	1	---			Q^2 = .743		
	2	.26	---				
Obtained	3	.20	-.06	---			
Matrices	4	.28	.13	.57	---		
	5	.45	.26	.07	.29	---	
	6	.21	-.01	.13	.44	.27	---
	1	---			Q^2 = .831		
	2	-.06	---				
Ordered	3	.13	.57	---			
Matrices	4	.26	.20	.28	---		
	5	.26	.07	.29	.45	---	
	6	-.01	.13	.44	.21	.27	---

146 Parents of Retarded[3]

		1	2	3	4	5	6
	1	---			Q^2 = .335		
	2	.50	---				
Obtained	3	.00	.08	---			
Matrices	4	.05	-.01	.34	---		
	5	.27	.29	.08	.01	---	
	6	-.02	-.09	.06	.12	.00	---
	1	---			Q^2 = .341		
	2	.27	---				
Ordered	3	.29	.50	---			
Matrices	4	-.01	.05	.01	---		
	5	.08	.00	.08	.34	---	
	6	.00	-.02	-.09	.12	.06	---

84 Manager-Executives[4]

		1	2	3	4	5	6
	1	---			Q^2 = .334		
	2	.38	---				
Obtained	3	-.03	.05	---			
Matrices	4	.11	.19	.61	---		
	5	.05	-.10	.00	.01	---	
	6	-.12	-.04	.05	.21	.02	---
	1	---			Q^2 = .345		
	2	.61	---				
Ordered	3	.05	.19	---			
Matrices	4	-.03	.11	.38	---		
	5	.05	.21	-.04	-.12	---	
	6	.00	.01	-.10	.05	.02	---

71 Parents of Non-Retarded[5]

		1	2	3	4	5	6
	1	---			Q^2 = .833		
	2	.28	---				
Obtained	3	.18	.48	---			
Matrices	4	.27	.36	.69	---		
	5	.22	.29	.19	.14	---	
	6	.12	-.08	.20	.35	.10	---
	1	---			Q^2 = .833		
	2	.28	---				
Ordered	3	.18	.48	---			
Matrices	4	.27	.36	.69	---		
	5	.22	.29	.19	.14	---	
	6	.12	-.08	.20	.35	.10	---

522 Total Sample[6]

		1	2	3	4	5	6
	1	---			Q^2 = .800		
	2	.46	---				
Obtained	3	-.10	.06	---			
Matrices	4	-.02	.02	.49	---		
	5	.20	.16	.08	.15	---	
	6	-.05	-.15	.15	.40	.19	---
	1	---					
	2	.46	---				
Ordered	3	.20	.16	---			
Matrices	4	-.05	-.15	.19	---		
	5	-.10	.06	.08	.15	---	
	6	-.02	.02	.15	.40	.49	---

[1]Critical ratio of r at .05 level = .16.

[2]Critical ratio of r at .05 level = .23.

[3]Critical ratio of r at .05 level = .16.

[4]Critical ratio of r at .05 level = .22.

[5]Critical ratio of r at .05 level = .23.

[6]Critical ratio of r at .05 level = .09.

TABLE 31.--Sexual composition of German samples.

Group	Male	Female	Total
Special Education Teachers	86	62	148
Regular School Teachers	28	46	74
Parents of Retarded	68	76	144
Manager-Executives	81	2	83
Parents of Non-Retarded	21	49	70
Total	284	235	519

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