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ABSTRACT

A FACET THEORY ANALYSIS OF "WHAT'S IN A NAME": BLACK VERSUS NEGRO

By

Martin George Brodwin

Statement of the Problem

The very existence of racism in our world signifies the importance of this study. In the United States, prejudice of white people toward blacks needs to be thoroughly investigated for change to be instrumented. The colleges and universities are ideal institutions for imperative changes in race relations to originate and be generated through the society. Thus, a study of "attitude-behaviors" of college students is a valuable undertaking.

The present study[1] reviewed the literature behind the Attitude Behavior Scale as instrumented by Jordan and Hamersma (1969), and explored some specific areas of attitude research that led to development of the scale. The research is based upon Guttman's (1950, p. 51) definition of attitude as a "delimited totality of behavior with

[1]Part of a larger cross-cultural study under the direction of John E. Jordan, College of Education, Michigan State University, East Lansing, Michigan, 48823.

respect to something," and Jordan's (1971a) conception of "attitude-behavior" to connote this.

Two different attitude instruments were used in this study; the Attitude Behavior Scale, and a twenty-item Semantic Differential scale as developed by Osgood, Suci, and Tannenbaum (1957). Use of the Semantic Differential provided information on the relationships between race, color labelling, word symbolism, and attitudes about the attitude object in-situation.

Methodology

Three forms of the racial attitude scale, ABS-WB-G, ABS-WN-G, and ABS-BW-G, were used in this study. These scales evaluated white college students' "attitude-behaviors" toward two racial labelling concepts, 'black' and 'Negro.' These two attitude object labels were used to assess whether the words 'black' and 'Negro' elicited different attitude-behaviors in white college students. The groups tested were also given a Semantic Differential measure of attitudes toward race, along with the Attitude Behavior Scale.

Several hypotheses were analyzed using product moment coefficients, multivariate analysis of variance techniques, two-sample t-tests, and the Kaiser Q^2 for simplex approximation.

Results

Some of the more important results were the following:

1. No differential relationships were found between students taking the "ABS toward blacks" and those taking the "ABS toward Negroes," on the six Levels of the Attitude Behavior Scale.
2. The attitude data from the samples did approximate a Guttman simplex structure.
3. Some significant correlations were found between the variable of efficacy and the six ABS Levels.
4. There were no significant correlations between the 'evaluation,' 'potency,' and 'activity' dimensions of the Semantic Differential and the six Levels of the ABS.

A FACET THEORY ANALYSIS OF "WHAT'S IN A NAME": BLACK VERSUS NEGRO

By

Martin George Brodwin

A THESIS

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What shall I tell my children who are black
Of what it means to be a captive in this dark skin?
What shall I tell my dear one, fruit of my womb,
Of how beautiful they are when everywhere they turn
They are faced with abhorrence of everything that is black
The night is black and so is the boogyman.
Villains are black with black hearts.
A black cow gives no milk. A black hen lays no eggs.
Bad news comes bordered in black, mourning clothes black,
Storm clouds, black, black is evil
And evil is black and devils food is black . . .

What shall I tell my dear ones raised in a white world
A place where white has been made to represent
All that is good and pure and fine and decent,
Where clouds are white and dolls, and heaven
Surely is a white white place with angels
Robed in white, and cotton candy and ice cream
And milk and ruffled Sunday dresses
And dream houses and long sleek Cadillacs
And angel's food is white . . . all, all . . . white.

(Margaret Burroughs, cited in Banks & Joyce, 1971, p.35).

Dedicated to my brother, Buddy

PREFACE

This study is one in a series, jointly designed by several investigators, as an example of the 'project' approach to graduate research. A common use of instrumentation and theoretical material, as well as technical and analyses procedures, was both necessary and desirable.

ACKNOWLEDGEMENTS

First of all, I would like to thank my advisor and chairman Dr. John E. Jordan who has not only given me guidance and encouragement in all aspects of this dissertation, but has helped give my life direction. With him, I hope for a lifelong friendship and continuing professional relationship.

Also, I would like to express my deep appreciation to my committee members: Dr. Thomas Gunnings, Dr. Maryellen McSweeney, and Dr. Stephen Yelon for their time in reviewing the data, making helpful suggestions, and giving me new insight.

The roles of Dr. Keith Anderson and Dr. R. G. Rex were paramount in the administration and gathering of my data.

Also thanks to my friends and fellow students, Bahman Dadgostar, Marie Hightower, Sue Kohen, and B. N. Singh who aided in the completion of the data.

I would like to mention the names of those doctoral students whose encouragements and friendships have helped make my stay at Michigan State University an enjoyable experience; John Aycock, Lynne Brody, Bahman Dadgostar,

Ken Gottlieb, James Hightower, Aubrey Radcliffe, B. N. Singh, and Win Smith.

I would like to thank my friend and typist, Judy Little, who helped me finish work on this thesis.

Last but by no means least, without the continuous assistance and encouragement from my parents, Dr. and Mrs. Allen L. Brodwin, and my brother Bennett, this dissertation would not be possible.

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CHAPTER I

INTRODUCTION

What happens to a dream deferred?
Does it dry up
like a raisin in the sun?
Or fester like a sore--
And then run?
Does it stink like rotten meat?
Or crust and sugar over--
like a syrupy sweet?

Maybe it just sags
like a heavy load.

OR DOES IT EXPLODE
(Langston Hughes, 1966, p. 268).

Problem

Perhaps the most crucial issue facing Americans in the United States today, concerns their feelings and beliefs toward persons of differing backgrounds and cultures. Relations between blacks and whites in this country are at a critical crossroads; both races have become increasingly outspoken in expressing their opinions toward members of the other race. Expression of these views has not always been rational or representative, but nevertheless these expressions stem from real feelings, emotions, hurts, and misunderstandings.

The education and training going on in our schools not only reflect the views of the surrounding society, but

can have an effect in changing them. Students now in school will soon become a permanent part of the larger, surrounding environment and culture. As one psychologist sees it (Gunnings, 1971, p. 101), "our young students must not become protectors of the system, but innovators who are striving to make this a better world for all." If we as educators, counselors, and researchers fail to make an impact on our students, to at least make them aware of racial injustice, we will have as a result contributed to racism in American society. Students must become willing "to take on the system--a system that has so obviously created inferior inner city education, a system that has dehumanized man, and a system that has oppressed minorities" (Gunnings, 1971, p. 101).

America is at present a racist society. Racism and racist conceptions pervade most of the institutions in this country. Blauner (1970, pp. 115-116) pointed out two distinctive characteristics of this racism. "First, that (aside from age and sex) the division based upon color is the single most important split within the society, the body politic, and the national psyche." The second characteristic contributing to racism, cited by Blauner, involves the major institutional structures in America: "that various processes and practices of exclusion and subordination based upon color are built into the major public institutions (labor market, education, politics, and

law enforcement) with the effect of maintaining special privileges, power, and values for the benefit of the white majority."

The black man in America has not been the only group discriminated against. According to Allport (1954), prejudice against all minority groups has had a similar basis:

> The rich take to opium and hashish, those who cannot afford them become anti-Semites. Anti-Semitism is the morphine of the small people . . . Since they cannot attain the ectasy of love they seek the ectasy of hatred . . . It matters little who it is they hate. The Jew is just convenient. If there were no Jews the anti-Semites would have to invent them (p. 343).

Out of the restrictions and policies of racism, grew a demand for black identity, soon transformed into a quest for a recognition of a broadly-based black culture. Recognition of this black culture by the white majority would enhance understanding between the races. "For white Americans, too, a recognition of the vitality and innovation of all of Afro-America may help organization and expression and give us all a fuller means of understanding and prizing cultural diversity in our midst" (Szwed, 1970, pp. 295-296). Szwed emphasized the importance for whites to "grasp the dimensions of Afro-American culture and history and restore complete identity to a people who have been so long divided from their own past and from each other" (p. 296).

The demand for whites to recognize and accept African culture in black Americans has been noted by other authors. However, there is an inherent confusion on the part of whites in accepting the fact that blacks do have a cultural heritage that they want to assert. For so many years, white America has denied this cultural heritage to blacks; it now becomes very difficult for whites to see and accept it. They want to deny its existence, and often feel that blacks should be assimilated into the white dominant middle-class society. The view of blacks as simply "white men in black skins" pervades much of white and even black thinking (Fanon, 1967).

The struggle of the black man in America is related to the world-wide changes taking place especially in Africa. During the past twenty years, newly born nations in Africa have been seeking and struggling for independence. In his quest for 'black culture,' the American black has been discovering a unity with these nations. "In his own battle, the American Negro is able to achieve a new sense of kinship and feeling of purpose--a new, larger, black identity. The struggle of black men has become symbolic of the struggle of all oppressed groups to achieve dignity and respect in the face of bigotry and discrimination" (Proshansky and Newton, 1968, p. 215).

> A cultural revolution is a change of outlook. It takes place inside the head. It is an overthrow of old values, prejudice, beliefs, and opinions, and the

> installation of the new. What happens outwardly merely reflects this internal transformation. This revolution among blacks in America shone forth in the form of great self-pride, assurance, fearlessness, determination, and a new aggressiveness (Smith, 1970, p. 38).

According to many social scientists, the words 'Negro' and 'black' have different connotations for both the white community and the black community. The term 'Negro' is more associated with past racist notions of inferred inferiority. 'Black' is more associated with pride and power in being black, and in black heritage as related to African ancestry.

> Black Power is concerned with organizing the rage of Black people and with putting new, hard questions and demands to White America. As we do this, White America's responses will be crucial to the questions of violence and viability. Black Power must (1) deal with the obviously growing alienation of black people and their distrust of the institutions of this society; (2) work to create new values and to build a new sense of community and belonging; and (3) work to establish legitimate new institutions that make participants, not recipients, out of a people traditionally excluded from the fundamentally racist processes of this country (Hamilton, 1969, p. 126).

The importance that terminology plays in the changing identity of blacks in this country has been succinctly put by Killian and Grigg (1964): "at the present time, integration as a solution to the race problems demands that the Negro foreswear his identity as a Negro."

Recent literature (Jordan, 1971a; Hamersma, 1969) points out that the black community has, as a whole, accepted and preferred the term 'black' as opposed to

'Negro.' The white community, however, has been slower in accepting this newer terminology, and many of the values that accompany it.

The specific, experimental problem of this study was to assess the differing attitudinal dispositions that white college students associate with the word 'Negro' as opposed to the word 'black' in an attitude scale.

Most attitude research has been of a theoretical nature. Studies point out what they feel attitude is composed of, but they rarely submit their theory to statistical analysis. The Jordan-Guttman system is an attempt to devise a definition of attitude that encompass both the semantic, theoretical analysis and the statistical structure underlying the definition. Jordan has expanded Guttman's three-facet, four-Level theory, into a five-facet, six-Level design, encompassing the old tripartite (Plato) scheme of analysis by dividing attitude into cognitive elements, affective elements, and conative elements.

Need

According to C. Eric Lincoln (1968) one result of the present black power struggle has been an attack on the word 'Negro.' Many black authorities consider this word as originating from the time of slavery in this country and insist on usage of the words 'black' or 'Afro-American.' The coordinator of the Afro-American History and Cultural

Center of the New York City Board of Education, Keith Baird (cited in Lincoln, p. 132), stated that: "This is not a minor semantic dispute. It engages the emotions and intellect of a vast number of people, from Southern campuses to the corner of 125th Street and Seventh Avenue in Harlem (p. 132). Another scholar in black psychology, Fuller (cited in Lincoln, p. 133), saw the issue in terms of a generation gap: "those who are willing to accept the 'status quo' use the term 'Negro,' while those who seek improvement use 'black' or 'Afro-American.' Such organizations as the "National Association for the Advancement of Colored People" and journals such as "Negro Digest" are under much pressure to change their titles. M. R. Karenga stated the following concerning black identification: "Yesterday we thought we were Negroes. Today we know we are Black men but we still have some Negro hang-ups." He stressed the concept of culture giving people an identity, a purpose, and a direction; culture "tells us (blacks) who we are, what we must do, and how we can do it." Karenga saw 'Negroes' as imitating white culture for so long that they have begun to believe that it is their own (Lincoln, p. 10-11). Black Power advocates use the word 'black' for "black brothers and sisters who are emancipating themselves," while using the word 'Negro' contemptuously for Negroes "who are still in Whitey's bag and who still think of themselves as Negroes" (Bennett, 1967, p. 47).

> Anything except that odious word, 'Negro' which has such a ridiculous heritage of mockery. We were not dropped into America; we were forcibly dragged from Africa. So what else are we? Words are the greatest avenue of communication and much more reliable than signs. They are forceful symbols . . . Let us all rally around Afro-American. I think black has connotations of arrogance (J. Harden, 1968, p. 10).

J. Leo of the New York Times saw the recent effort to find a more meaningful term beginning in the late 1950's when many black nations in Africa sought independence. As the myth of uncivilized Africa was corrected, the road was open for identification with these newly emerging nations (Lincoln, 1968).

Williams and Kirkland (1971) differentiated between 'black' and 'Negro' thusly:

> To be Negro in America has certain meanings which need to be clarified here. Negroes are made and manufactured in the United States. The following descriptions are representative: The Negro is concerned with education for purposes of individual achievement; he wishes to become integrated or assimilated into the mainstream; he accepts white standards; he is materialistic; he accepts gradualism; he defines the problem as within the Negroes, not in the system.
>
> To be a black man in contemporary America has certain connotations regarding self-definition: The Black man sees education as a vehicle for social change; he believes group goals are more important than individual goals; nation building is vital to his survival; he selects leaders based on competence, not status; he is pro-Black, not necessarily anti-White; he sets norms and defines goals in terms of self-determination; there is a sense of urgency about his goals (p. 115).

R. Moore, in his book, The Name Negro Its Origin and Evil Use, stated that the word 'Negro' is so 'saturated

with filth,' so 'polluted' with the white man's stereotypes, that "there is nothing to be done but to get rid of it" (Bennett, 1967, p. 54).

To many, the term 'Negro' means the continuation of 'master-slave mentality' first perpetuated in the slave period in America. "They maintain that a change in name will short-circuit the stereotyped thinking patterns that undergrid the system of racism in America" (Bennett, 1967, p. 47).

According to D. Edwards, assistant managing editor of the New York Amsterdam News, one of the largest black newspapers in America, young blacks especially are against continued use of the label 'Negro.' They often associate it with the oppression and slavery into which blacks were born, and the fact that this label was forced upon them involuntarily. The word is thought of in connection with "Uncle Tomism." 'Black' or 'African' is the preferred usage (Bennett, 1967).

K. Baird felt that the identity crises blacks undergo in America was heightened by use of the designation 'Negro.' It helps promote the continued depressed economic and social status of blacks in America. As Baird stated: "Positive and enhancing self-regard is a psychological necessity of life, and the name borne by an individual or group can be an effective vehicle and symbol of group or individual self-regard" (Bennett, 1967, p. 52).

Language tends to prestructure both thinking and acting. Baird was concerned with the effect certain words have upon people: "A name can determine the nature of the response given to it by virtue of the associations which its use conjures up" (p. 52). Baird did not believe that a change in vocabulary would solve all racial problems but he felt it could make a significant difference in relations between blacks and whites. "The very act and fact of changing the designation will cause the individual to be redesignated to be reconsidered, not only in terms of his past and his present but hopefully in terms of his future . . . Designation has an important bearing on destiny" (Bennett, 1967, p. 52).

> The word came into use, Baird says, in connection with the enslavement of the African in the New World. The use of the word became connected with what Earl Conrad has so well called the 'Negro-Concept,' that grotesque conception of the African which has been shaped in the mind of the European and forced with Procrustean cruelty on the person and personality of the black American (Bennett, 1967, p. 52).

"Baird believed that the word, 'Afro-American,' would soon supplant the word 'Negro.' He did not object to the term 'black,' which, he said, lacks the historical and cultural precision of the word 'Afro-American'" (Bennett, 1967, p. 54). A second author, R. Moore, supported Baird's philosophy. "Black," Moore stated, "is a loose color designation which is not connected with land, history and culture. While I (Moore) recognize it as a step

forward in getting rid of the term 'Negro,' I think it is necessary to take the next step" (p. 54).

The word 'Negro' is of Portuguese and Spanish origin, dating back to the time of the African Slave Trade, where the term referred to those Africans captured and transported as slaves to the New World. "This word, which was not capitalized at first, fused not only humanity, nationality and place of origin but also certain white judgments about the inherent and irredeemable inferiority of the persons so designated"(Bennett, p. 48). Literate blacks of the time, preferred the terms 'African' and 'black' and resisted usage of the label 'Negro.' The first institutions and organizations begun in America by those of African origin carried African designations: "The Free African Society," "The African Methodist Episcopal Church," "The African Baptist Church." The Free African Society was founded in Philadelphia in 1787. Its preamble began: "We, the Free Africans and their descendants of the city of Philadelphia in the state of Pennsylvania or elsewhere . . ."(Bennett, p. 48).

Further resistance to the term 'Negro' can be found in the 1868 Constitutional Convention of North Carolina. James Walker Hood, one of fifteen black delegates to that convention, expressed the belief that there were no 'Negroes' present at the convention. Further, he insisted "that the word 'Negro' had no significance as to

color, but could only be used in a reproachful or degrading sense"(Bennett, 1967, pp. 48-50).

The present study was designed to test whether racial terminology, in particular 'black' versus 'Negro,' is related to the way in which white people perceive black people. Research on the Semantic Differential (Williams, 1964, 1966) suggested that the term 'black' has been given many negative connotations. It is unclear how much of the negative connotations attributed to the word 'black' generalizes to the word 'Negro.' It would be useful to discover more of the underlying reasons as to why the two racial terms, 'black' and 'Negro,' elicit different "attitude-behaviors," if indeed they do.

Since the data of this study was of a correlational nature, inference as to the direction of causality would not be feasible. One can formulate conclusions as to the importance of color labelling as eliciting more positive or more negative racial "attitude-behaviors" in college students. If the terms 'black' and 'Negro' do elicit different attitudes, the relationship between race labelling and racial attitudes would appear to merit further research.

Valentine (1971) stated that for a white counselor to be successful with a black client, his client must be bi-cultural. Williams and Kirkland (1971) felt that this is less than ideal. White counselors work most successfully

with the 'Negro' part of the black client or the part that desires to be or become white, but cannot work with the part that is black or desires to become black.

Before attempting to change attitudes, it is necessary to discover what attitudes exist and where they occur. Jordan (1970) felt that the value of such research lies in the possible contributions toward the understanding and conceptualizing of the determinants and facets underlying the attitude structure. According to Yuker (1965, p. 15), "an attitude can be defined as one type of predisposition toward behavior. Because this is so, by finding out what a person's attitudes are, we can gain information that will help us both to understand and to predict a person's behavior." Mehrens and Lehmann (1968) stated that attitudes are learned and because of this can be changed if it becomes necessary. However, before this process of change can occur, it is necessary to discover the present status and existence of the attitudes.

The need for the study of racial attitudes in our society is not only obvious, but imperative. Behavior of blacks and whites toward each other in this country has reached the point of callousness and the height of ridiculousness. It is no longer excusable, in the opinion of this author, to allow even one 'ounce' of racist behavior to go unchallenged. Efforts must be made to combat racism in every institution and at every level in this

society. We must abhor and combat prejudice and racism within our society and within ourselves until it becomes only a vestige of a once-dreamt nightmare.

Need for research in the area of attitudes is of paramount importance at this time. Jordan's use of facet analysis is an attempt to find a system that will facetize attitude into its semantic and structural components.

Many studies have analyzed and defined attitude and delved into the theory behind the concept. Since the time of Plato (Allport, 1954), attitude has traditionally been divided into three separate areas: thinking, feeling, and acting (cognitive, affection, and conation). This tripartite scheme has continued to the present time.

As theories of attitude were being formed, so was the statistical branch of psychology. The factor analytic methods owe their beginning to early Greek quantitative methods and development of the scientific method. Research and expansion of factor analysis was continued by Thurstone (1935, 1947) and Spearman (1927, 1951). R. B. Cattell (1952, 1964) was the first psychologist to apply factor analytic methodology to analysis of personality theory.

Guttman (1944, 1953b, 1958) began the use of facet analysis, a technique similar to the traditional factor analysis of Thurstone and Spearman, but clearly distinct from it. Guttman (1950a) had operationally defined attitude as "a delimited totality of behavior with respect

to something" (p. 51). Jordan (1971a) used this definition to link attitude and behavior, in his attempt at constructing attitude scales that will measure "attitude-behaviors" on six levels. Jordan's theory combines a modification of Guttman's (1959) three-facet, four-Level system with theoretical notions of "attitude-behavior" consistent with the cognitive-affective-conative analysis dating back to early Greek philosophy.

Purpose

The purpose of this dissertation is two-fold. The first is to find out whether the two terms 'black' and 'Negro' are indeed associated with differing "attitude-behaviors" in white college students. The ABS is a measure of attitude-behavior along a cognitive-affective-conative trichotomy. The present study is designed to test whether the two terms, 'black' and 'Negro,' elicit different "attitude-behaviors" as measured by the ABS/WN-B. It was hypothesized that the "ABS toward Negroes" will elicit more positive "attitude-behaviors" than the "ABS toward blacks."

The Semantic Differential was used as a second measure of attitudes. It was hypothesized that students would respond more positively to the word 'Negro' on a Semantic Differential than they would to the word 'black.'

The purpose of this study was to find out whether or not the word 'Negro' elicited more positive responses on these two measures of 'attitude' than the word 'black.'

The second, and perhaps more encompassing purpose, was to review the theory behind the Attitude Behavior Scale to give the present author a better understanding of a system that may eventually help promote and uncover a meaningful definition and measurement of attitude. Through the definition of attitude by the method of facet analysis, it is hoped that the realm of attitude can then be comprehended sufficiently well that attitude change can be predicted and "controlled." This "prediction and control" will hopefully be used to help people understand why certain of their behaviors are harmful not only to others, but to themselves as well.

Definitions

Guttman (1950a, p. 51) defined attitude as "a delimited totality of behavior with respect to something." An attitude is not merely a "predisposition to behavior," as previous researchers have claimed (Allport, 1935) but is also the behavior with respect to the attitude object.

Jordan (1971a, pp. 6-7) agreed with Guttman's (1950a) definition of attitude, stating that it "is consonant with a structural or facet theory approach to the study of attitudes and behavior"; Jordan used the hyphenated term

"attitude-behavior" to denote his conception of attitude as 'behavior.' Throughout this study, attitude will be conceived of in this manner, as "attitude-behavior." When 'attitude' or 'behavior' is mentioned, it should be noted that the term is referring to the totality of attitudes and behaviors, taken as a single, unitary concept, unless otherwise stated.

Hypotheses

H-1: Whites taking the "ABS toward blacks" will have significantly more negative attitudes than whites taking the "ABS toward Negroes."

H-2: The attitude data from the sample will form a Guttman simplex.

H-3: There is a positive relationship between a high efficacy score and positive attitudes on the ABS.

H-4: Subjects taking the Semantic Differential will give the concept 'Negro person' a significantly higher rating on the 'evaluation' dimension of the Semantic Differential than the concept 'black person.'

H-5: Subjects taking the Semantic Differential will give the concept 'black person' a significantly higher rating on the 'potency' dimension of the Semantic Differential than the concept 'Negro person.'

H-6: Subjects taking the Semantic Differential will give the concept 'black person' a significantly higher rating on the 'activity' dimension of the Semantic Differential than the concept 'Negro person.'

H-7: A higher efficacy score on the ABS will be correlated with more positive scores on the 'evaluation' dimension of the Semantic Differential for the concepts 'friend,' 'black person,' 'white person,' 'Negro person,' and more negative scores for the concept 'enemy.'

H-8: There will be a positive relationship between high scores on the 'evaluation' dimension of the concepts 'black person' and 'Negro person' of the Semantic Differential and positive scores on the ABS.

H-9: There will be no significant correlations between high scores on the 'potency' dimension of the concepts 'black person' and 'Negro person' of the Semantic Differential and positive attitudes on the ABS.

H-10: There will be no significant correlations between high scores on the 'activity' dimension of the concepts 'black person' and 'Negro person' of the Semantic Differential and positive attitudes on the ABS.

Organization of the Thesis

Chapter I serves as an introduction to the thesis. It includes a statement of the problem, the need, and the purpose of the study. Also included within this first chapter is a brief section of definitions and the hypotheses tested. An extensive review of Guttman-Jordan facet design, tracing it back to its origin, comprises Chapter II. Chapters III and IV review the relevant literature in the areas of race relations between black and white persons, and the Semantic Differential as it relates to race and color, respectively. The general methodology used in studies dealing with the Attitude Behavior Scale is discussed in Chapter V. Chapter VI refers to the specific design and methodology of the present study. The data and results are analyzed in Chapter VII, while Chapter VIII includes summary material, recommendations for futher research, and conclusions of the study.

CHAPTER II

HISTORICAL ANTECEDENTS OF FACET THEORY AS IT RELATES TO GUTTMAN-JORDAN METHODOLOGY

> Biological scientists agree that all men belong to one species, homo sapiens ("wise man"). If Arthur Koestler and others are correct in suggesting that man may prove to be an evolutionary mistake, man's choice of a name for his species will seem to have been not only immodest (see Pettigrew, 1964, p. 59) but most inappropriate. This, however, is a judgment that the future will have to render (E. E. Baughman, 1971, p. 2).

In order to understand the methodological and psychological aspects of attitude research as related to human behavior, it is beneficial to trace the historical development of scaling techniques and attitude research from its origin. This analysis will concentrate on those developments important and crucial to methodology used by both Louis Guttman in facet analysis (1959) and John E. Jordan (1971a) in his research on attitude-behaviors toward various attitude objects.

To understand behavior, scientists throughout history have employed various techniques to categorize human actions, beliefs, and thoughts and a number of techniques have been developed by which behavior can be observed and described. These methods can be classified into three

general categories. Observation is concerned with viewing, description, and analysis of individual and group behavior. This approach can be found in early anthropological and sociological research studies, and it is still employed today. In the second technique, that of self-report, the subject reports to the researcher what he is feeling, thinking, or believing, and/or what he has actually done. The verbalizations are then classified, and from these categorizations, an attempt is made to analyze behavior. This technique is still employed in areas of psychology such as psychoanalysis, Gestalt psychology, and existentialism. A third technique which can be employed is that of measuring behavior through some external, methodological tool.

Jordan's (1970, 1971a, 1971b) attitude-behavior research and his development of the series of Attitude-Behavior Scales is a combination of the second and third techniques. The Attitude-Behavior Scale is a self-report instrument, attempting to measure an individual's thoughts, feelings, and overt behavior. It is an attempt to define attitude-behavior,[1] first through categorization and description and second through quantification, measurement, and prediction of behavior.

---

[1]"Two basic views permeate the literature on attitude research; one defining attitude as a 'predisposition to behavior', and the second emphasizing attitude as 'behavior.'" Jordan (1971a), however, believes that attitudes and behaviors are not separate or disparate

The present analysis is concerned with the methodological and theoretical construction and analysis of conceptions related to attitude-behavior. A current and prolific research endeavor in the area of scaling and attitude research has been that of Guttman's facetized design and scaling methodology as well as Jordan's attitude-behavior scale analysis. This chapter traces the historical and theoretical development of statistical innovations and psychological interpretations and explanations of attitude-behavior.

Early Foundations of Attitude-Behavior Research

The early Greek philosophers laid the basic foundation for what was eventually to become the 'scientific method.' The cosmologists were the earliest known group of thinkers who attempted to explain the environment that surrounded them; their explanations revolved around understanding through animism, myth, and magic. According to Hutten (1962), "Science begins with Thales . . . he exemplifies the scientist who makes a bold, unifying hypothesis but whose imagination is kept in bounds by a respect for reality" (p. 57). The beginnings of the movement away

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entities, but are varying points along the same variable; hence, he used the hyphenated term, attitude-behavior, to connote a synthesizing of what is usually considered two separate and distinct entities. The new usage was partly derived from Guttman's (1950a, p. 51) definition of attitude, as a "delimited totality of behavior with respect to something" (Jordan, 1971a, p. 7).

from mythical explanations of the world toward more scientific, naturalistic observation can be attributed to the time of this early Greek philosopher-scientist, Thales.

The most extensive reaction to the magic and mythical interpretations of the cosmologists was that of the Sophists. The beginnings of empirical research date back to the Greek Sophist movement during the Golden Age of Greek civilization: 461-431 B.C. They desired to study the individual and his culture in a practical, concrete manner; they used the empirical-deductive method as their main technique of investigation. With this theoretical development, explanations of human behavior became more observational and empirical, replacing many of the past mythical notions and conceptions.

According to Zeller (1881), however, the scientific method cannot be credited specifically to Sophist philosophy; their importance lies in breaking with the cosmological explanation of the universe, which was based on myth and religious foundations. Although the Sophists questioned mythical conceptions, they did not systematically use objective and empirical analysis. The Sophists prepared the ground for the zeitgeist of scientific and philosophical thought, that would permit the development of methodological techniques and theoretical views through which the evolution of the scientific method could be developed.

> . . . for its purpose the Sophist movement was not to guarantee objective knowledge, but only subjective readiness of thought and practical versatility. This form of culture is tied to no scientific system and principle, its distinctive character appears far more in the ease with which it takes from the most various theories whatever may be useful for its temporary purpose; and for this reason it propagates itself not in separate and exclusive schools, but in a freer manner, by mental infection of different kinds (Zeller, 1881, p. 514).

Stace (1967) interpreted this period of Greek development as a time when the Sophists undermined and destroyed the beliefs in the classical interpretation of the universe according to the cosmologists, and prepared the way for such new interpretations of the weltanschauung of Socrates, Aristotle, Archimedes, and others. It was Aristotle who attempted to catalogue knowledge in a systematic form. Archimedes "anticipated the modern modes of scientific thinking in his way of dealing with general principles of nature" (Boring, 1950, p. 6). Thus, the later Greeks, successors of earlier Greek contributors, began the movement toward measurement and evaluation of the surrounding environment through quantitative methods.

Modern quantitative methodology dates back to the four basic stages in the scientific method, developed by the Greeks: (a) naturalistic observation, (b) classification and analysis of natural phenomena into meaningful descriptive categories, (c) formulation of hypotheses of cause and effect based on such analyses, and (d) the value of quantitative methodology. The Greeks extended their

studies into what can be considered the first applications of experimental hypothesis testing and critical observation. "It is to the great credit of these ancient people that they were able to develop what in essence amounts to a sophisticated scientific methodology more than 2,000 years ago" (Chaplin and Krawiec, 1968, p. 17). The methods of critical observation were prevalent in the West in the Thirteenth Century with the rediscovery of Aristotle (Crombie, 1952). The early British and German scientists in the Eighteenth Century greatly enhanced and improved on these first attempts at scientific methodology and experimentation.

Early Experimental Research, Theory and Development: British Empiricism and German Experimentalism

In search for the first experimentation that culminated with the eventual development of a systematic and methodological study of attitudes, the importance of early Greek thinking has been noted. The next prominant development in the trend that would eventuate in modern scaling techniques involved British Empiricism. This school was heavily steeped in the empirical tradition; the principle of association, first seen in Aristotelian notions, was extended by the empiricists. The general law of association, first stated by early Greek philosophers, was taken up by Hobbes and Locke in the Seventeenth Century and rediscovered years later by Hartley:

> The general law of association is that if sensations have often been experienced together, the corresponding ideas will tend to occur together; if A has been associated with B, C, and D in sensory experience, the sensory experience A, occurring alone, will tend to arouse the ideas of B, C, and D, which accompanied it (Heidbreder, 1933, p. 54).

This law laid the foundation for what was later formulated by Guttman (1959) as the 'contiguity hypothesis.' As will be seen, Guttman's hypothesis consisted essentially of a modification and reformulation of this associationistic principle applied to different realms of science, in particular that of intellectual ability and attitude research.

In Nineteenth Century Germany, new developments and theories were introduced into the scientific stream of thought which would permit the kind of research developed by Guttman (1959) and Jordan (1971a). The fountainhead of the mathematical and statistical developments in German psychology can be traced to Kantian philosophy. Kant's (Peters, 1962) first crucial contribution to the German tradition of psychology, was to explicate the methods and techniques of science; his second contribution "was his contention that science is characterized by mathematical as well as by empirical description. His celebrated fusion of the empirical standpoint of Hume with the rationalist standpoint of Wolff involved the aphorism that an empirical inquiry is as scientific as it contains mathematics" (p. 533). According to Brett, (Peters, 1962) Kant molded

and directed psychology into the area of measurement which stimulated and enhanced the development of statistical and mathematical models.

Two basic trends in psychology emerged at this time; statistical-empirical on the one hand, and introspective-action on the other. The beginning of the statistical and mathematical approach to attitude measurement began with these early German experimentalist and British empiricist contributions. The concepts of Kant served as the cornerstone to the whole school of experimental psychology in that these researchers began to employ measurement and methodological techniques. In close parallel to Kant was the experimentalist, Herbart, who not only tried to formulate mathematically precise laws of consciousness, but evolved techniques whereby psychology, as a science, could employ the mathematical model (Peters, 1962).

The experimental tradition continued with the work of Weber (Chaplin and Krawiec, 1968), who served as a link between the first early attempts at experimental investigation and the beginning of experimental work in the field of psychology that lead to eventual application of these early mathematical techniques to the era of scaling and attitude research. The first major application of this new scientific methodology in the area of scaling and attitude research, was undertaken by Fechner. According to Chaplin and Krawiec (1968, p. 40), his "methods have stood

the test of time to become fundamental procedures in psychophysical measurements, mental testing, and attitude scaling . . ."

Unlike Kant, Fechner was not a strict methodologist; he had a humanistic philosophical bent along with his mathematical and scientific interest. His significance lies in the fact that he applied rigorous methods to practical, everyday functioning. This is the crux of attitude research today - to be able to make statements about behavior and behavioral change, but at the same time to be able to make these statements with some degree of validity and reliability to relevant public concerns.

According to Brett (Peters, 1962, p. 534) "the main function of measurement in science is surely to facilitate the testing of hypotheses by expressing them more exactly. Quantitative techniques enable scientists to answer precisely questions unearthed by cruder qualitative methods." This was what Fechner (Peters, 1962) attempted to do, and also what Guttman and Jordan are attempting a century and a half later. Both these attempts have employed rigorous scientific methods to understand human thought and behavior. As Brett (Peters, 1962, p. 534) has pointed out:

> there is little point in going round measuring unless the object of devising such measuring techniques is the testing of interesting hypotheses. Measurement by itself does not produce scientific hypotheses any more than do laboratories or grants for research . . . The advance of science depends upon the development of imaginative assumptions as well as upon exact techniques for testing them.

The next crucial step in the development of the psychological measurement of attitudes is found in the contribution of Wundt (Boring, 1950), considered the founder of psychology as a formal discipline. Wundt laid the foundation for modern experimental psychology. His use of experimental observation and analysis for understanding mental phenomena was the culmination of the trend begun by Weber and Fechner to utilize physiological and physical methods in psychological investigation.

Wundt provided an impetus for a new type of psychology: that of the 'new' psychology of content, otherwise understood as structural psychology. "He provided for the new psychology its structure and form, its self-consciousness, its name, its first formal laboratory, its first experimental journal, as well as the systematic pattern with respect to which the experiments could be formulated and given their significance" (Boring, 1950, p. 334).

The 'new' psychology of content can be considered introspective, sensationistic, elementistic, and associationistic. Consciousness was its subject matter; therefore, it was introspective. The nature of consciousness was revealed through sensation - thus the 'new' psychology was of a mental chemistry. Sensations, images, and feelings were thought to be the elements making up the compounds of mental thought. Lastly, because association was the very principle of compounding, the 'new' psychology was

associationistic. The British Empiricists had previously shown how perceptions and meaning can be obtained through an association of various parts. This was the early law of association postulated by Hobbes and Locke; its basic conception was carried through psychological thought and is seen in Guttman's (1959) 'law of contiguity' (Chaplin and Krawiec, 1968).

Titchener (Peters, 1962), a strict student of Wundt's, brought this 'new' psychology to America in the form of Structuralism. The idea and practice of rigorous analysis was carried through in psychology, thus making psychology more scientific and respected by the physical sciences. Titchener tightened the theory and experimentation of Wundt, while stressing the concept of 'structor' by adding a new element, affective states, to the existing states of sensations and images. These three elements, Titchener utilized in classifying what he perceived as conscious thought. All varied and complex mental processes were derived from these three elements and their attributes of quality, intensity, and duration. Titchener's structuralism gave psychology a more strict, rigorous scientific flavor, that aided in the development of more exacting measurement techniques, necessary for the birth and maturation of attitude research.

The Development of Quantitative Psychology

John Graunt can be considered the first statistician and the founder of statistics. In 1662, he published a demographic analysis of plague deaths in London, perhaps the first attempt to interpret biological and social phenomena from quantitative data. His book, Natural and Political Observations Made Upon the Bills of Mortality, was well accepted as an important study of vital statistics; was published and revised several times by Graunt; and was published and enlarged by Sir William Petty after Graunt's death.

Quetelet, a Belgian astronomer, made one of the first successful attempts to apply statistical methods to data involving human biological and social functioning. In discussing human variability along certain variables, Quetelet described the significance of the normal curve distribution (Boring, 1950; Chaplin and Krawiec, 1968).

Galton used the work of Quetelet in developing various methods of statistical analysis, such as the median, standard score, and correlation technique. "The modern techniques for establishing the validity and reliability of tests, as well as the various factor analytic methods, are direct outgrowths of Galton's discovery" (Chaplin and Krawiec, 1968, p. 516). Galton was the first to formulate the statistical tool of 'coefficient of correlation.' With Dickson, Galton published a paper in 1866 describing

what they called the 'index of co-relation.' Soon thereafter, it was renamed 'Galton's function,' and eventually, in 1892, was changed to its present name, 'coefficient of correlation'--symbolized by 'r'--(Boring, 1950, p. 479).

The mathematical foundation of correlation can be credited to the mathematician, Karl Pearson. In 1896, Pearson used correlation in solving problems posed by mathematical research in psychology and biology. Biometrika was founded by Pearson, Galton, and Weldon in 1901. Both Pearson and Galton, working together much of the time, established statistical methods as a fundamental technique for the investigation of psychological problems (Boring, 1950).

Just after these innovations, Spearman developed a two-factor theory of human intellectual functioning based on these newly discovered methods of correlation. The two-factor theory interpreted intelligence as containing a basic overall component, the general (G) factor, common for all intellectual skills and activities, and several specific (s_1, s_2 . . .) factors, which varied for different skills and tasks of intelligence. In 1912, along with Hart, Spearman devised a correlation matrix hierarchy for these factors (Boring, 1950). This factor analytic work, plus the advancements made especially by Thurstone have culminated in Guttman's faceted definition of intellectual ability and attitudes (Jordan, 1972b).

"We may note the line of descent for factor analysis, noting only the prominant ancestors: Laplace - Quetelet - Galton - Pearson - Spearman - Thomson - Garnett - Burt - Thurstone" (Boring, 1950, p. 481). Although not an adherent to factor analytic methods, Guttman (1948) used much of the research advanced by the factor analysts. Their discoveries in factor analysis and correlation matrix hierarchies "laid the groundwork" for Guttman's facet theory and structural analysis procedures such as the simplex.

> Factor analysis is a method for analyzing a set of intercorrelated performances into as many independently variable factors as justify the labor of computation. Each factor is defined by the degree to which it participates in each of the various original performances. You get the most important factor analyzed first, and presently you stop with some residuals that are too small to merit consideration. This technic is used mostly with mental tests and is not appropriate when the problem-situation can be separated in advance into various parameters which are subject to independent experimental control and variation (Boring, 1950, p. 481).

At this last stage of separating the problem-situation in advance into various parameters which are subject to independent experimental control and variation, Guttman departed from factor analysis by using facet methodology for exploring underlying 'dimensions.'

The concept of hierarchical correlation as applied to intelligence was influential in psychological research around the turn of the century. Burt (1909) published one of the first studies utilizing a hierarchy of correlation coefficients. He stressed the belief that well measured

and controlled, applied data could provide just as sound or even superior hierarchical coefficients of correlation than theoretical data did. Spearman (1927) believed that a good fit could be obtained only from theoretical coefficients; Burt, however, attempted to prove that it was possible to demonstrate a sound hierarchy of coefficients through applied, well-controlled measurable data (see Tables 1 and 2). In a discussion of hierarchies, Burt stated the following concerning Spearman: "Dr. Spearman and Prof. Krueger imply that satisfactory hierarchies are exhibited only by the 'pure' or theoretical coefficients, but it appears that those based on amalgamated measurements are better than those based on theoretical 'correlation', if the experimental are carefully controlled" (Burt, 1909, p. 163). The correlations do not fit the proposed scheme with perfect precision and cannot be expected to because like all empirical observations they are subject to error.

The concept of hierarchical correlation was used by several psychological researchers: (Peterson, 1908; Stockton, 1921; Herring, 1921). Peterson employed (Table 3) the statistical concept of hierarchical correlations in his five-level table of intellectual ability (Spearman and Jones, 1951).

During the early 1900's, statistical and psychological research and theory began noting the importance of correlation coefficients and hierarchical analysis; however,

TABLE 1.--Hierarchy of Coefficients (Amalgamated Series).[a] (A) Elementary School.

		Dotting Apparatus	Alphabet	Sorting	Imputed Intelligence	Dealing	Spot Pattern	Tapping	Mirror	Sound	Lines	Touch	Memory	Weight
Dotting Apparatus	Observed coefficient	--	77	67	60	69	57	57	50	52	48	38	20	16
	Theoretical value	--	80	73	72	72	67	63	49	45	33	28	27	05
	Deviation	--	03	06	12	03	10	06	01	07	15	10	07	11
	P.e. of coefficient	--	05	07	08	06	08	08	09	09	09	11	12	12
Alphabet	Observed coefficient	77	--	74	61	66	59	54	29	52	16	62	31	07
	Theoretical value	80	--	69	69	69	65	60	46	43	32	26	25	05
	Deviation	03	--	05	08	03	06	06	17	09	16	36	06	02
	P.e. of coefficient	05	--	06	08	07	08	09	11	09	12	07	10	12
Sorting	Observed coefficient	67	74	--	52	72	45	61	34	52	14	22	19	23
	Theoretical value	73	69	--	62	61	59	54	42	39	28	24	23	04
	Deviation	06	05	--	10	11	14	13	08	13	14	02	04	19
	P.e. of coefficient	07	06	--	09	06	10	08	11	09	12	11	10	19
Imputed Intelligence	Observed coefficient	60	61	52	--	44	76	47	67	40	29	13	57	-13
	Theoretical value	72	69	62	--	69	58	53	41	39	28	23	23	04
	Deviation	12	08	10	--	16	18	06	26	01	01	10	34	17
	P.e. of coefficient	08	08	09	--	10	05	10	07	10	08	12	08	12
Dealing	Observed coefficient	69	66	72	44	--	76	47	67	40	29	13	57	-13
	Theoretical value	72	69	61	60	--	58	53	41	39	28	23	23	04
	Deviation	03	02	11	16	--	07	12	01	05	19	00	04	03
	P.e. of coefficient	06	07	06	09	--	10	07	11	12	10	11	12	12
Spot Pattern	Observed coefficient	57	59	45	76	51	--	41	41	47	25	63	26	11
	Theoretical value	67	65	59	58	58	--	48	37	35	35	26	21	04
	Deviation	10	06	14	16	07	--	07	04	12	01	18	05	07
	P.e. of coefficient	08	08	09	05	09	--	10	10	10	11	12	11	12
Tapping	Observed coefficient	57	53	61	47	65	41	--	41	47	08	26	-05	22
	Theoretical value	63	60	54	53	53	48	--	36	34	25	20	20	04
	Deviation	06	06	07	08	12	07	--	05	13	18	06	25	18
	P.e. of coefficient	08	09	08	10	08	10	--	10	10	12	11	12	12
Mirror	Observed coefficient	50	29	34	67	40	45	45	--	34	16	08	05	-05
	Theoretical value	49	46	42	41	41	37	36	--	25	19	15	15	03
	Deviation	01	17	08	26	01	04	05	--	09	03	07	10	08
	P.e. of coefficient	09	11	11	17	10	10	10	--	10	12	12	12	12
Sound	Observed coefficient	52	52	52	40	34	47	47	34	--	-07	-01	01	-13
	Theoretical value	45	43	39	39	39	35	34	25	--	17	14	14	02
	Deviation	07	09	13	01	05	12	13	09	--	24	15	13	15
	P.e. of coefficient	09	09	09	10	17	10	10	12	--	12	13	12	12
Lines	Observed coefficient	48	16	14	29	47	25	08	16	-07	--	26	06	19
	Theoretical value	33	32	28	28	28	26	26	25	17	--	10	10	02
	Deviation	15	16	14	01	19	01	17	03	24	--	16	04	17
	P.e. of coefficient	09	12	12	08	10	11	12	12	12	--	11	12	12
Touch	Observed coefficient	38	62	22	13	23	03	26	08	-01	26	--	16	29
	Theoretical value	28	26	24	23	23	21	20	15	14	10	--	08	01
	Deviation	10	36	02	10	00	18	06	07	15	16	--	08	28
	P.e. of coefficient	11	07	12	12	12	12	11	12	12	11	--	12	11
Memory	Observed coefficient	20	31	19	57	19	26	-05	05	01	06	16	--	05
	Theoretical value	27	25	23	23	23	21	20	15	12	10	18	--	01
	Deviation	07	06	04	34	04	05	25	10	13	04	08	--	04
	P.e. of coefficient	12	10	11	10	12	11	12	12	12	12	12	--	12
Weight	Observed coefficient	16	07	23	-13	01	11	22	-05	-13	19	29	05	--
	Theoretical value	05	05	04	04	04	04	04	04	03	03	01	01	--
	Deviation	11	02	19	17	03	17	18	08	15	17	28	04	--
	P.e. of coefficient	12	12	12	12	12	12	11	12	12	12	11	12	--
	Average deviation = .100.													
	Average p.e. = .101.													

[a] From Burt (1909, p. 161).

TABLE 2.--Hierarchy of Coefficients (Amalgamated Series).[a] (B) Preparatory School.

		Dotting Apparatus	Alphabet	Imputed Intelligence	Mirror	Memory	Spot Pattern	Tapping	Sorting	Sound	Lines	Weight	Touch	Dealing
Dotting Apparatus	Observed coefficient	--	84	84	71	69	62	48	73	48	25	07	03	-03
	Theoretical value	--	85	80	76	70	66	66	60	48	39	14	-07	-13
	Deviation	--	01	04	05	01	04	16	13	00	14	07	10	10
	P.e. of coefficient	--	06	06	10	12	12	16	10	16	19	20	20	20
Alphabet	Observed coefficient	84	--	80	48	84	67	57	76	34	22	-14	-28	45
	Theoretical value	85	--	78	74	68	64	64	58	51	37	14	-07	-12
	Deviation	01	--	02	26	16	03	07	18	17	15	28	21	57
	P.e. of coefficient	06	--	07	16	06	15	14	09	18	19	20	19	16
Imputed Intelligence	Observed coefficient	84	80	--	54	78	75	43	56	37	17	-19	-06	29
	Theoretical value	80	78	--	70	64	60	60	55	44	35	13	-06	-12
	Deviation	04	02	--	16	14	15	17	01	07	18	32	00	41
	P.e. of coefficient	06	07	--	14	08	09	16	14	17	20	19	20	18
Mirror	Observed coefficient	71	48	54	--	43	38	75	34	57	54	44	31	-44
	Theoretical value	76	74	70	--	61	58	57	52	42	34	12	-06	-11
	Deviation	05	26	16	--	18	20	18	18	15	20	32	37	33
	P.e. of coefficient	10	16	14	--	16	17	09	18	14	14	16	18	16
Memory	Observed coefficient	69	84	78	43	--	74	54	64	17	28	-05	-35	03
	Theoretical value	70	68	64	61	--	53	53	48	39	31	11	-06	-10
	Deviation	01	16	14	18	--	21	01	16	22	03	16	29	13
	P.e. of coefficient	11	16	18	16	--	09	14	11	20	19	20	18	20
Spot Pattern	Observed coefficient	62	67	65	38	74	--	38	51	25	34	07	-44	19
	Theoretical value	66	64	60	58	53	--	50	45	36	29	11	-05	-10
	Deviation	04	03	15	20	21	--	12	08	11	05	04	39	29
	P.e. of coefficient	12	15	09	17	09	--	17	15	19	18	20	16	19
Tapping	Observed coefficient	48	57	43	75	54	38	--	48	28	44	34	07	-31
	Theoretical value	66	64	60	57	53	50	--	45	36	29	11	-05	-09
	Deviation	16	07	17	18	01	12	--	03	08	15	23	12	22
	P.e. of coefficient	16	14	16	09	14	17	--	16	19	17	18	20	19
Sorting	Observed coefficient	73	76	56	34	64	51	48	--	38	00	-22	-14	02
	Theoretical value	60	58	55	52	48	45	45	--	33	27	10	-05	-09
	Deviation	13	18	01	18	16	06	03	--	05	27	32	09	11
	P.e. of coefficient	09	08	14	18	11	15	16	--	17	20	19	16	20
Sound	Observed coefficient	48	34	37	57	17	25	28	38	--	07	34	17	-17
	Theoretical value	48	51	44	42	39	36	36	33	--	21	08	-04	-07
	Deviation	00	17	07	15	22	11	08	05	--	14	26	21	10
	P.e. of coefficient	16	18	17	14	20	19	19	17	--	20	19	20	20
Lines	Observed coefficient	25	22	17	54	28	34	44	00	07	--	35	19	-13
	Theoretical value	39	37	35	34	31	29	29	27	21	--	06	-03	-06
	Deviation	14	15	18	20	03	05	15	27	14	--	29	22	07
	P.e. of coefficient	19	19	20	14	19	18	17	20	20	--	18	19	20
Weight	Observed coefficient	07	-14	-10	44	-05	07	34	-22	34	35	--	38	-35
	Theoretical value	14	14	13	12	11	11	11	10	08	06	--	-01	-02
	Deviation	07	28	32	32	16	04	23	32	26	29	--	39	33
	P.e. of coefficient	20	20	19	16	20	20	18	19	19	18	--	17	18
Touch	Observed coefficient	03	-28	-06	31	-35	-44	07	-14	17	19	38	--	-48
	Theoretical value	-07	-07	-06	-06	-06	-05	-05	-05	-04	-03	-01	--	01
	Deviation	10	21	00	37	29	39	12	09	21	22	39	--	49
	P.e. of coefficient	20	19	20	18	18	16	20	16	20	19	17	--	15
Dealing	Observed coefficient	-03	45	29	-44	03	19	-31	02	-17	-13	-35	-48	--
	Theoretical value	-13	-12	-12	-11	-10	-10	-09	-09	-07	-06	02	01	--
	Deviation	10	57	41	33	13	29	22	11	10	07	33	49	--
	P.e. of coefficient	20	16	18	16	20	19	19	20	20	20	18	15	--

Average deviation = .165.
Average p.e. = .162.

[a] From Burt (1909, p. 162).

TABLE 3.-- Correlations of Peterson[a]

Nature of Tests	1	2	3	4	5
Reasoning	--	.95	.83	.40	.45
Generalization	.95	--	.86	.40	.28
Abstract thought	.83	.86	--	.64	.48
Memory	.40	.40	.64	--	.31
Accuracy	.45	.28	.48	.31	--

[a]From Spearman and Jones (1951, p. 64).

these techniques would not gain prominance in the field of attitude research until the early 1950's. Until statistical theory and measuring techniques could be developed, and practical use made of sampling methods, ordering of data, and sampling error, further development of the hierarchy or 'order' concept could not be undertaken.

"Spearman differed from other intelligence testers in trying to generalize the methods of factor analysis, which had a practical origin, to the field of general psychological theory" (Peters, 1962, p. 734). Because of Spearman's attempts to apply his research to fields other than mental abilities, he has become extremely crucial and relevant in the area of attitude research. "The statistical approach of the Spearman School has also been applied to the measurement of personality traits, attitudes, and values" (Peters, p. 736). McDonnel (1927, cited in Peters) employed these methods in studying bodily dimensions; Gates (1927, cited in Peters) used them in a study of various physical

traits. In evaluating and diagnosing personality traits and clusters, Eysenck relied on the statistical innovations of Spearman (Peters, 1962).

These correlational techniques were also important in Adorno, Frenkel-Brunswik, Levinson, and Sandford's work on The Authoritarian Personality, and in Murray's Explorations in Personality (Peters, 1962). Guttman (1958) credited Spearman as being one of the forerunners to facet theory analysis. Spearman postulated that "the mentally presenting of any two characters tends to evoke a knowing of the correlative characters" (Peters, p. 735). Basically, this was a restatement of Locke's principles; the basic notion of contiguity will later be seen in Guttman's work. Although Spearman's laws were perhaps of questionable value, it was his contributions to the conception of concomitant variation between factors that became significant to the field of psychology. "The discovery of concomitant variations is the beginning of the establishment of scientific laws or relations of functional dependence between variables" (Peters, p. 736). John Stuart Mill dealt with the issue of concomitant variation between factors on a philosophical basis before Spearman.[1]

According to Cattell (1952), the birth of multifactor analysis began with Spearman, who was the first to

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[1]Personal communication with Dr. Maryellen McSweeney, College of Education, Michigan State University, Oct. 5, 1972.

develop theorems in factor analysis in his work with the concept of intelligence as a single-factor theory. Spearman's hierarchical arrangement involved the entire matrix; all adjoining columns in the matrix were proportional. This is illustrated in Table 4, "Correlation Matrices with Variables in Hierarchical Order."

TABLE 4.--Correlation Matrices with Variables in Hierarchical Order[a]

	V_6	V_1	V_4	V_5	V_3	V_2	V_3	V_7
V_6								
V_1	.90							
V_2	.82	.75						
V_3	.73	.61	.58					
V_4	.51	.49	.43	.36				
V_5	.43	.30	.25	.22	.18			
V_6	.31	.27	.21	.15	.11	.09		
V_7	.24	.15	.12	.10	.08	.06	.05	

[a]From Cattell (1952, p. 49).

Thurstone modified Spearman's theory by introducing the concept of the existence of many factors instead of solely one as Spearman had postulated. Multifactor analysis involved the hypothesizing of the existence of several common factors from a set of correlations. This analysis (also called tetrad difference) enabled the researcher to examine many dimensions of the variable and analyze the relations of the factors to each other at one time, and

replaced previous analysis that had to be undertaken on one factor at a time (Cattell, 1952).

It was necessary for Spearman (1927) in his early research to develop and refine the new statistical methods of correlation, 'order,' and hierarchy of data. Thurstone (1935), was also instrumental in advancing traditional factor analysis; many authors have referred to him as the father of factor analytic research. He not only helped find a solution to the problem of attitude measurement, but he gave impetus and direction to attitude change research (Ostrom, 1968). It was Thurstone who developed the concept of 'clustering' which evolved into multiple factor analysis. The concept of correlation clusters involved positing certain primary mental abilities with common space between them. "The area of common overlap in each cluster defines a primary mental ability." Thurstone hypothesized seven primary mental abilities, in opposition to Spearman's 'G' and 's' factors (Chaplin and Krawiec, 1968, pp. 524-525).

Thurstone's support for his theory of Primary Mental Abilities was based on correlations of various mental tests. Different tests revealed different 'factor loadings' or different degrees of closeness to the varying correlational clusters. The battery of tests could be refined and improved to correlate more highly with each of the underlying factors.

Thurstone (1935) introduced into the mainstream of psychological research the concept of 'mapping' as well as expanding and developing the previously discovered concept of hierarchy. Guttman's use of the "mapping sentence" is developed in detail in Chapter V.

Throughout this research, Thurstone was concerned with making psychology more rigorous; thus, he attempted to have his research conform to the scientific method. The criterion by which he accepted or rejected his studies was the degree to which "it facilitates the comprehension of a class of phenomena which can be thought of as examples of a single construct rather than as individualized events" (Thurstone, 1947, p. 52).

Thurstone (1947) applied factor analysis to problems involving measurement of intellectual ability and individual differences. Unsatisfied with Spearman's interpretation of intelligence based on 'one' general factor, Thurstone advanced the concept that intelligence was composed of several separate factors which appeared in correlational clusters. Factor analysis was regarded as a general scientific method to be used in studying individual differences. Thurstone believed that the main purpose of factor analysis was indeed for the study of these individual differences. The assumption underlying factor analysis is that a variety of behaviors within a certain area are not only related, but they are at least partially determined by a small number of factors:

> Factor analysis is useful where basic concepts are lacking in an area, and experiments have been difficult to conceive. The new methods have a humble role. They enable us to make only the crudest first map of a new domain. But if we have scientific intuition and sufficient ingenuity, the rough factoral map of a new domain will enable us to proceed beyond the exploratory factoral stage to the more direct forms of psychological experimentation in the laboratory (Thurstone, 1947, p. 56).

In strict factor analytic studies, there are no clearly defined independent or dependent variables; rather, all the variables of the study are treated in a like manner. If, however, one desires in a study to predict one variable from another, a statistical study should be performed (Thurstone, 1947).

Factor analysis, as an empirical method, is typically useful where a researcher is attempting to discover, explore, and order variables underlying a certain problem. The factor analyst is especially interested in studying correlations that he observes, and accounting for these correlations among the variables "in terms of the smallest number of factors and with the smallest possible residual errors" (Thurstone, 1947, p. 60). The process of factor analysis involves the investigation of a set of variables to discover if they exhibit, or can be modified to exhibit, some underlying order that is responsible for producing the individual differences observed. The variables and data are then ordered in the form of a matrix. This matrix formulational analysis of correlations among variables owed

its beginning to the development of the methods of correlation by Pearson and Galton, Spearman and Hart's technique of ordering correlations in the form of a hierarchical matrix, and finally Thurstone's writings stressing the importance and usefulness of matrix analysis to the fields of psychology and education. Although it was Spearman and Hart who first noted matrix analysis, it was left to Thurstone to popularize the method. As Thurstone wrote in 1947, "the matrix formulation of factor analysis seems to have been generally accepted, and it has largely replaced the previous methods of factor analysis" (Thurstone, 1947, p. VI).

A correlation matrix involves a table of intercorrelations, as defined by Thurstone (1947, pp. 1-2) below:

> Matrices and determinants involve rectangular arrangements of numbers. Any rectangular arrangement of numbers is called a matrix, irrespective of what the numbers mean. If the matrix has m rows and n columns, the matrix is said to be of order m x n. In designating the order of a matrix, it is customary to refer to rows first and columns second.

Table 5 illustrates one of Thurstone's matrices, specifying the product-moment correlations between sixteen measurements on thirty-two factors, but does not specify any 'order' or hierarchy of the factors. Future developments in correlation matrices illustrate the concept of 'ordered' factors in a matrix. When it was found that intercorrelations such as the ones illustrated in Table 5 exist, Thurstone considered the matrix to be of 'simple structure.'

TABLE 5.--Correlation Matrix [a]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1.00	.50	.50	.32	.29	.58	.72	.49	.58	.45	.31	.66	.53	.76	-.35	.11
2	.50	1.00	.50	.32	.36	.42	.57	.49	.74	.67	.33	.54	.64	-.16	-.14	-.23
3	.50	.50	1.00	.32	.52	.42	.88	.82	.90	.45	.30	.78	.75	.19	-.84	-.72
4	.32	.32	.32	1.00	.95	.96	.65	.80	.61	.91	.98	.78	.82	.12	-.22	-.15
5	.29	.36	.52	.95	1.00	.90	.75	.90	.75	.90	.94	.84	.89	.05	-.37	-.31
6	.58	.42	.42	.96	.90	1.00	.78	.83	.70	.92	.94	.86	.86	.34	-.29	-.09
7	.72	.57	.88	.65	.76	.78	1.00	.95	.95	.74	.64	.95	.91	.39	-.69	-.46
8	.49	.49	.82	.80	.90	.83	.95	1.00	.93	.83	.78	.94	.95	.19	-.64	-.52
9	.58	.74	.90	.61	.75	.70	.95	.93	1.00	.79	.60	.90	.93	.11	-.64	-.57
10	.45	.67	.45	.91	.90	.92	.74	.83	.79	1.00	.90	.83	.90	.01	-.22	-.21
11	.31	.33	.30	.98	.94	.94	.64	.78	.60	.90	1.00	.77	.80	.11	-.12	-.09
12	.66	.54	.78	.78	.84	.86	.95	.94	.90	.83	.77	1.00	.97	.34	-.59	-.39
13	.53	.64	.75	.82	.89	.86	.91	.95	.93	.90	.80	.97	1.00	.12	-.52	-.44
14	.76	-.16	.19	.12	.05	.34	.39	.19	.11	.01	.11	.34	.12	1.00	-.28	.34
15	-.35	-.14	-.84	-.22	-.37	-.29	-.69	-.64	-.64	-.22	-.12	-.59	-.52	-.38	1.00	.76
16	.11	-.23	-.72	-.15	-.31	-.09	-.46	-.52	-.57	-.21	-.09	-.39	-.44	.34	.76	1.00

[a] From Thurstone (1947, p. 431).

He suggested that when it was discovered that such a correlation matrix existed between tests, that the tests should then be administered to several different new populations for verification and confirmation of the original hypothesized 'simple structure.' These new and different experimental populations should be selected in ways different than the way used for selection of the original population. "If the primary factors are in the nature of basic parameters (factors) that are not merely reflections of the experimental conditions or the particular selective conditions, their interpretations should be the same for the several experimental groups" (Thurstone, 1947, pp. 471-472).

Thurstone's mathematically precise definition of 'simple structure' follows:

> Each test may be regarded as a radial vector in a common-factor space of as many dimensions as there are common factors in a test battery. The correlation between any pair of tests is the scalar product of the test vectors. Since the scalar product of a pair of vectors is independent of the co-ordinate system, it follows that the interest correlations define the co-ordinate system. But the co-ordinate axes are the scientific categories in terms of which the tests are to be comprehended. This is an interesting indeterminacy. One of the principal problems of factor analysis is to find a unique set of co-ordinate axes, either orthogonal or oblique, which shall represent scientifically meaningful categories in terms of which the tests may be comprehended. This problem has been solved in terms of what I (Thurstone) have called 'simple structure' of a trait configuration (Thurstone, 1935, p. VIII).

According to Ostrom (1968), the period between 1930 and 1950 marked the emergence of attitude theory; at this

time, extensive research began into the study of how attitudes were formed and changed. Much of modern theoretical and empirical explanations of attitude are based on studies from these two decades. Ostrom credited Thurstone with being the one theorist most contributive to attitude research with his solution to the problem of the measurement of attitudes. Those who followed the work of Thurstone (e.g., Guttman, 1944; Likert, 1932) "accepted this evaluative characteristic . . . Thurstone, and later Likert (1932) and Guttman (1944), provided a rational methodology for the measurement of attitudinal affect" (Ostrom, 1968, pp. 7-27).

Chaplin and Krawiec (1968) presented a good summation of what Thurstone and other factor analysts sought to achieve, and what Jordan is attempting to carry through in practice in the realm of attitude-behavior research. "When the smallest number of factors which can account for the correlations has been discovered and when the factors have been identified with their corresponding processes, the psychologist is in possession of a theoretical description of the system he is seeking to establish" (p. 527). Validation of this entire process was based on two contingencies: (a) the validity of the operations from which the system was derived, and (b) the psychologist's judgment upon which the assumptions are based.

This dimensional analysis of attitudes was accepted by those who followed Thurstone. Thurstone believed that an individual's attitudinal affect depended on the average of the affective distribution of his personal beliefs. "Thurstone, and later Likert (1932) and Guttman (1944), provided a rational methodology for the measurement of attitudinal affect" (Ostrom, 1968, p. 27). In his introductory statements concerning factor analysis, Guilford (1954) described what he perceived as the primary goal of science:

> Science, forever motivated to bring order out of chaos, to reduce to the simple that which is complex, wants to know what is the smallest number of concepts with which one can order and describe adequately the multiplicity of phenomena that come under its scrutiny (p. 470).

This task has been undertaken by factor analysts; to discover the smallest number of variables or dimensions of personality or some other characteristic of human functioning that will adequately describe that particular functioning. Through exploration of a specific universe of traits, factor analysis sought to discover principles of classification (Burt, 1966).

Spearman was one of the first to devise a correlation matrix including the concept of order, illustrating the intercorrelations among variables. Table 6 illustrates simple proportionality in a correlation matrix. As can be seen in Table 7, when the same variables are rearranged, the

porportionality of the intercorrelations becomes clearer. The coefficients now run from high to low in every row and column; this phenomenon Spearman called 'hierarchical order' (Guilford, 1954).

TABLE 6.--Intercorrelations of Six Hypothetical Tests Having One Common Factor, Illustrating the Condition of Simple Proportionality in a Correlation Matrix [a]

	a	b	c	d	e	f
a		.40	.10	.45	.30	.35
b	.40		.16	.72	.48	.56
c	.10	.16		.18	.12	.14
d	.45	.72	.18		.54	.63
e	.30	.48	.12	.54		.42
f	.35	.56	.14	.63	.42	
	1.60	2.32	.70	2.52	1.86	2.10

[a]From Guilford (1954, p. 473).

TABLE 7.--Same Intercorrelations as in Table 6 with Variables Rearranged so as to Show the Proportionality More Clearly[a]

	d	b	f	e	a	c
d		.72	.63	.54	.45	.18
b	.72		.56	.48	.40	.16
f	.63	.56		.42	.35	.14
e	.54	.48	.42		.30	.12
a	.45	.40	.35	.30		.10
c	.18	.16	.14	.12	.10	

[a]From Guilford (1954, p. 474).

"Thurstone believed that when simple structure is achieved in rotation, the factors have psychological meaning. In other words, simple structure is a principle of order in psychological nature" (Guilford, 1954, p. 485).

The question of why use factor analysis at all has been aptly answered by Guilford (1954, p. 522). "The most defensible reason a psychologist can have for making a factor analysis is to aim toward the clarification of useful concepts in a domain where adequate concepts are now lacking."

Cattell (1964) served as a link between Spearman, Thurstone and other factor analysts who concentrated their efforts toward understanding intelligence, and the beginning of the application of factor theory to the area of personality.

The statements by Cattell concerning linear simplex theory both explained what Spearman and Thurstone had achieved with the matrix hierarchy and what Jordan and his associates have recently encountered in their facet analysis of attitude-behavior.

> Stated now in more detail our postulate for the linear simplex is that natural relationships may take all levels of order and complication of mathematical equations to represent them, but that in the total population of relationships (and in the majority of random samples), there will tend to be a pyramid or hierarchy of complexity, with the basic linear relationship as the most common and with increasing complexity of equation progressively less frequent (Cattell, 1964, p. 732).

Cattell also discussed how errors in the simplex arise and noted some ways to overcome them; the basic reasoning he utilized was similar to Guttman's (1944, 1954b) explanations of why a perfect simplex was not often attained, and by Jordan (1971a) in his analysis of attitude theory:

> On the assumption that the relationship we are dealing with is linear (since the majority will be so) any error of estimate from any variable x to another, y, will be a statistical phenomenon, due to (a) experimental and sampling error, and (b) partial determination of the variance of the second variable by variables other than the first. The departure of the raw score scaling from the ideal scaling operates as experimental, instrumental error of measurement and this reduces accuracy of estimate -- and the correlation coefficient -- only through source (a) (Cattell, 1964, p. 732).

Cattell was the first to apply factor analytic methods to an analysis of personality theory, while attempting to specify its structure. At about the same point in time, Guttman (1959) began to use facet analysis as his primary method of investigation. Lingoes and Vandenberg (1966, p. 2) felt that Guttman's facet theory (1959) served, in some respects, as "the nonmetric counterpart of Thurstone's concept of simple structure." The differences between traditional factor analysis and Guttman's facet theory can be seen in comparing his system to the factor system of Cyril Burt. Both Guttman and Burt were attempting analysis of qualitative data; their techniques were arrived at independently but bear similarities. Burt's goal was to factorize the data, while Guttman's primary aim "was to

present 'a theory and method of scale construction' by means of 'quantifying a class of attributes'" (Burt, 1953, p. 5). Guttman believed that factor analysis was suited for quantitative data and could not be used when dealing with qualitative variables (Burt). Guttman's objections to factor analysis were as follows:

1. Factor analysis is "designed only for quantifiable variables, and is consequently unsuited for qualitative data."
2. . . . "In order to apply factor analysis, we must begin by calculating correlation coefficients, and in the case of qualitative data such coefficients are bound to be misleading . . .
3. "The principle criterion for scalability is reproducibility. But factor analysis does not allow us to reproduce the original data from the so-called factor-measurements. Hence factor analysis can never show whether a scale is perfect or not."
4. "The Spearman-Thurstone approach to factor analysis is completely linear, and is therefore not adequate for analyzing the curvilinearities inherent in the scale pattern."
5. "From a scale analysis it can be known what a factor analysis will show; from a factor analysis it will usually be difficult, if not impossible, to know what a scale analysis will show" (Burt, 1953, pp. 10-11).

Facet analysis is "a tool for the organization of ideas" (Foskett, 1963, p. 111). Guttman's techniques serve as a method for research in social science. Foskett (p. 111) defined Guttman's facet analysis as "the coordination of elements from sets which together add up to the whole content of research projects."

> A facet, then, is a set of elements which may combine with other sets, and 'facets are involved . . . in almost any scientific endeavour in any field'. The theory of facets make it possible to design the

> 'universes of content' of research projects economically, and even to derive new psychological and sociological concepts (Foskett, 1963, p. 111).

Guttman Methodology

Guttman (1954b) based much of his structural research model on the factor analytic techniques of Spearman and Thurstone; although Guttman's method is not a factor analytic theory, he considers factor analysis a predecessor to facet analysis.

There has been a definite void in discovering and developing means in the social sciences to quantify qualitative data. In one of Guttman's (1944) early articles, he sought a recognition of this phenomenon, and also addressed himself to the task of discovering ways out of this dilemma. He presented a new approach to this problem by citing some quantitative methods that could be applied to data and research that is primarily qualitative in nature.

Guttman began this early article by defining terminology that he would use in building his system. This terminology has been carried over by Jordan in his own systematic analysis of attitude-behavior based on the methodology of Guttman's system.

According to Guttman (1944), "a variable denotes a set of values; these values may be numerical (quantitative) or non-numerical (qualitative)." 'Attribute' is used by Guttman to denote a 'qualitative variable;' these terms are interchangeable. "The values of an attribute (or of a

variable, too, for that matter) may be called its subcategories, or simply categories." A scale is the multivariate frequency distribution of the universe of given variables in which one can derive a quantitative variable "with which to categorize the objects such that each attribute is a simple function of that quantitative variable." These quantitative variables are called scale variables (pp. 139-140).

Guttman (1944) warned that perfect unidimensional scales should not be expected in actual, applied research. A method was developed to test data to find out if it forms a reasonable estimate of a relatively unidimensional scale. "The deviation from perfection is measured by the coefficient of reproducability, which is simply the empirical relative frequency with which the values of the attributes do correspond to the proper intervals of a quantitative variable" (p. 140). If a scale reaches eighty-five percent or better, Guttman considered this, although not a perfect scale, an efficient approximation to a 'theoretically perfect scale.' The values for each scale variable are called either scale scores or scores; the order of the objects in the scale by numerical order of scores is called their scale order. This 'scale order' is analogous to Spearman and Hart's 'hierarchy' and Thurstone's 'matrix formulation,' and, according to Thurstone, ". . . seems to have been generally accepted, and has largely replaced the

previous methods in factor analysis" (Thurstone, 1947, p. VI). In a more recent work, Guttman referred to this 'scale order' as 'structural theory' (1971).

In devising his method for quantifying qualitative data, Guttman (1944) relied on what he calls 'the universe of attributes.' The effect is directed toward scaling a universe of attributes, which is a large class of behavior, and contains 'all' of the attributes under investigation. "The universe consists of all the attributes that define the concept" (p. 141). The universe can also be defined as containing all the attributes that the researcher is interested in that have some common content; they would be classified under the same single heading, indicating the content of the variable class.

> An important property of a scalable universe is that the ordering of persons based on a sample of items will be essentially that based on the universe . . . Hence, we are assured that if a person ranks higher than another in a sample of items, he will rank higher in the universe of items. This is an important property of scales, that from a sample of attributes we can draw inference about the universe of attributes (Guttman, 1944, p. 147).

Guttman (1944) distinguished between ordinary problems of prediction and scaling via the universe of attributes. While in prediction problems, a dependent variable is to be predicted <u>from the attributes</u>, in the method of scaling <u>each attribute is predictable from the quantitative variable</u>. A quantitative variable is derived from the multivariate distribution such that each attribute is a simple

function of that variable; this procedure is undertaken only after discovering that a particular universe of attributes is indeed scalable for a population.

From this method of analysis, can be seen an important property of this particular technique, a property that becomes especially crucial in Jordan's extension of the Guttman system. Guttman (1944, p. 148) stated that "if the items have a multivariate distribution that is scalable, it can easily be seen that no matter what the outside variable may be, the same prediction weights may be given to the items." Jordan's research involved use of a similar universe of attributes applied to several different attitude objects. As suggested by Guttman (1959), Jordan has enlarged the theory "by letting the groups vary according to some principle" (p. 319). "The correlation of any outside variable with the scale scores is precisely the same as the multiple correlation of that outside variable with the items in the scale" (Guttman, 1944, p. 418). Thus, scaling of items having a multivariate distribution that is scalable, provides an invariant quantification of the attributes in order to predict any outside variable. Scale scores from a scalable multivariate distribution, can serve for almost any prediction purpose defined by the researcher (Guttman, 1944).

Thus, the major difference between scaling and prediction is that in prediction, a variable is predicted from

the attributes, while in scaling, an attempt is made to reproduce the attributes (or variables) from a quantitative variable" (Guttman, 1944).

In a discussion of the relativity of scales, Guttman (1944) gave an analysis of deviant or non-scale types. If these latter types are too numerous, thereby keeping the coefficient of reproducability below the eighty-five percent criterion Guttman has established, a unidimensional scale cannot be said to exist. The reason scales are derived is because there is a certain degree of uniformity of experience for the population being tested in order that the attributes have a similar meaning to the different individuals taking the test. Guttman added that the individuals who deviated from the scale analysis may be useful for some type of in-depth case study analysis.

A perfect scale order is dependent on only one component, that of the rank order underlying the attributes. One can deduce an individual's attitude or behavior on every item in the universe of attributes being evaluated, by observing his scale rank. The totality of behavior and the interrelationships between items can be measured by a single variable, the scale rank (Guttman, 1954b).

Guttman (1954b) divided factor analysis into two basic types: (a) common factors, the previous approach used by Spearman, Thurstone, and others; and (b) the method of order-factors, Guttman's own approach. Guttman did not feel

that these two approaches were totally different, but considered earlier factor analytic techniques as predecessors to his theory.

Shortly after its inception, various factor analytic methods began to converge toward a design and theory for measuring mental abilities. Guttman (1958) described these convergences and other relevant issues in his article, "What Lies Ahead for Factor Analysis." The work of Thompson, Thurstone, and Spearman centered around this search. Much of this theorizing was based on Spearman's concept of 'G' and its association with Thurstone's concept of 'simple structure.' Similar designs were developed by El Koussy, Guilford, and Guttman. El Koussy's design involved the study of ability and physical space. Guilford devised a facet theory based on many of the studies involving Thurstone's concept of simple structure. In his extensive study of the techniques of multivariate analysis used in the behavioral sciences, Guttman arrived at a similar design (Guttman, 1958).

Both Spearman and Thurstone were interested in psychological theories of mental abilities and the more abstract statistical and algebraic theory. Thurstone stressed the need for the algebra and statistics of factor analysis to be used in the investigation of psychological conceptions. Although his development of multiple-factor analysis appeared largely mathematical, Guttman (1958) stated that it

was primarily motivated by psychological considerations. Thurstone's multiple-factor theory grew out of Spearman's single-factor theory. By dividing Spearman's single-factor theory into several common-factors, Thurstone enumerated a multiple theory for the intercorrelations of mental abilities. Thurstone believed that the number of factors responsible for mental ability, should be relatively few in number compared to the large number possible for mental abilities or tests of mental ability. In opposition to Spearman, however, simple structure posits that not all common factors are involved in all the diverse mental abilities (Guttman, 1958).

Guttman (1958) continued to discuss the convergences of factor analytic theories by noting similarities in the work of El Koussy, Burt, and Spearman. Close parallels can be found in El Koussy's space abilities research, Spearman's psychological concepts involved with his single-factor theory, and Burt's conception of hierarchical levels of factors.

Guilford, on the other hand, drew upon the vast number of common-factors that had already been discovered by others as related to intellectual ability, and compiled a new, more complete listing of factors related to intelligence. Interested in finding psychological meaning for these factors that could be structured, Guilford devised a three-faceted scheme for intellectual ability. In this

scheme, he distinguished five types of intellect (memory, cognition, convergent thinking, divergent thinking, and evaluation) which were further divided into three types of content (figural, structural, and conceptual). This yielded 5 x 3 fifteen possible combinations of intellect and content. A third facet, type of thing, divided these fifteen elements into six additional subclasses (fundaments, classes, relations, patterns of systems, problems and implications). Thus, from three facets (intellect, content, and thing), 15 x 6 possible combinations were possible. Guttman stated that although these ninety common-factors may not be complete or correct in every detail, it was the design of the theory that would be so crucial to the future direction of studies in factor analysis (Guttman, 1958).

These above designs (El Koussy and Guilford) were referred to by mathematicians as Cartesian Products of Sets.

> If I is a set of intellectual abilities, if C is the set of three types of content, and T is the set of six types of things, then by the Cartesian product ICT is meant the set of ordered triples, say of the form ict, where i is an element of I, c is an element of C, and t is an element of T. Each set in a Cartesian product is what Fisher calls a 'factor' for his design of experiments, and an element of such a 'factor' is what he calls 'level of a factor'. Since this use of the word 'factor' is radically different from that of Spearman and Thurstone we have proposed that the word <u>facet</u> be used instead of Fisher's. A facet is nothing but a set involved in a Cartesian product. I, C, and T are the three facets of the Cartesian product ICT (Guttman, 1958, p. 508).

"Following Spearman, should we regard 'qualitative law' or a facet design as being a set of instructions for a test constructor as to what kinds of items he should make up for tests, then Guilford's ICT design provides instructions for ninety varieties of tests" (Guttman, 1958, p. 508). After a test was constructed and administered, the task would be to explain why a certain subject scored as he did in terms of the facets of the test design.

Guttman's (1958) radex theory of mental abilities began with Spearman's two general facets of complexity, 'relations' and 'fundaments.' By varying the level of complexity while holding content constant, a simplex correlation matrix could be obtained. Similarly, by varying content and holding level of complexity constant, it was possible to obtain a circumplex correlation matrix. Further, 'kind of complexity' could be expanded through use of El Koussy's and Guilford's facets.

Guttman (1958) suggested that after a design had become accepted for one area of endeavor (such as mental abilities), it should be possible to apply the design through modification to other areas of concern. In discovering the facet design for mental abilities, one also discovered the definition of mental abilities; their content is identical. The old definition of intelligence, "what an intelligence test measures, was facetless, and therefore quite useless for empirical study" (Guttman, 1958).

If the design was incomplete, additional facets and/or modification of the facets present might be necessary (Guttman, 1958).

> There is a great deal of work to be done on the purely conceptual level of designing a cleanly faceted system, or a definition of mental abilities. Guilford's, El Koussy's, and my own (Guttman's) two primitive facets by no means include all of those indicated by Spearman. A good deal of fruitful work in the future may go in the direction of simply deciding upon what one wants to mean by mental abilities in terms of facets. We have seen how major concepts of our great predecessors are retained in this reformulation, but retained in what may be a cleaner and less ambiguous form (Guttman, 1958, p. 514).

Guttman (1954b) described his 'radex theory,' which he designated to indicate 'radial expansion of a complexity,' as "a set of variables whose intercorrelations conform to the general order pattern prescribed by the new theory" (p. 260). A set of variables that possesses a simple order of complexity and can be arranged in a simple rank order from least complex to most complex, is called a 'simplex.' The variables contained within the simplex differ in the degree of their complexity. This holds for tests of similar kind; for example, in a group of tests measuring numerical ability, addition, subtraction, multiplication, and division differ largely in degree of complexity, from less complex to more complex.

In opposition to this simplex design, was what Guttman referred to as a 'circumplex.' The circumplex contains a 'circular order of complexity,' in which the

order is not from least complex to most complex, but rather has a circular order. Tests which contain the same degree of complexity will differ only in the kind of ability that they define. "Our empirical data will testify that different abilities such as verbal, numerical, reasoning, etc., do tend to have such an order among themselves" (Guttman, 1954b, p. 260).

Since the simplex analysis is so central to Jordan's (1971a) analysis of attitude-behavior, a brief review of the foundations that this theory rests upon is important. Spearman's early studies were based on postulating hierarchies for the relationship between two tests; these were arranged in such an order that the correlations between the tests decreased the further down in the hierarchy they were located. If you locate a number in the upper left corner of the table, moving anywhere to the right or down in the table, will result in the correlations tapering off (Table 8). Guttman (1954b), however, stated that attempts to apply this 'hierarchy hypothesis' met with failure, and the word 'hierarchy' disappeared from the literature. Guttman, especially in his analysis of simplex data, is attempting to revive usage of this concept.

Spearman's theory was based upon the assumption that one-common-factor held the hierarchy together; when one factor was postulated it was found that the hierarchical relationship could not be produced. Other theorists then

TABLE 8.--Test Intercorrelations for a Hypothetical Single-Common-Factor Structure[a]

Test	Common-Factor Loading	t_1	t_2	t_3	t_4	t_5
		.9	.7	.5	.3	.1
t_1	.9	(.81)	.63	.45	.27	.09
t_2	.7	.63	(.49)	.35	.21	.07
t_3	.5	.45	.35	(.25)	.15	.05
t_4	.3	.27	.21	.15	(.09)	.03
t_5	.1	.09	.07	.15	.03	(.01)

[a]From Guttman (1954b, p. 263).

postulated two, three, four, and even more common factors as central to leading to the hierarchical order; however, even these failed to lead to reproduction of the hierarchy. Guttman at first postulated that multiple common-factors are needed to explain the intercorrelations among the variables; this he stated proved to be an empirical failure, although it was mathematically accurate. Through modification of this theory, he has arrived at an alternative explanation of the system, that being the simplex. A theory closely related to the simplex is that of the circumplex, and both these theories are encompassed in the more comprehensive theory, the radex. This new approach encompassed much from the older theories and also eliminated many of the older approaches (Guttman, 1954b).

Guttman (1954b) considered the simplex, a facet theory, as being a viable alternative single-factor theory

to the older factor analytic technique, that of Spearman's single-common-factor hypothesis, while not utilizing an m-common-factor theory. The alternative single-factor theory involved the use of scaling and scale analysis. By giving semantic meaning to a rank order among quantitative variables, the hierarchy previously abandoned by those seeking multiple-common-factors, can be revived to serve as a useful means of analysis. Guttman (Guttman & Schlesinger, 1966; 1967) felt that this new facet analysis was feasible for mental tests, both theoretically and in applied research through use of the concept of complexity as the basis for comparing different variables. This was one juncture where Guttman replaced the older factor analysis with his own facet techniques:

> Suppose we are given n tests t_1, t_2 . . . t_n which differ only on a single complexity factor . . . Test t_1 is the least complex. Test t_2 is next; it requires everything t_1 does, and more. Similarly, t_3 is more complex than t_2, requiring everything t_2 does and more. In this case, t_3 is clearly also more complex than t_1. In general, t_{j+1} is more complex than t_j, and hence requires what all proceeding tests require, plus something more. Let g denote the total complexity factor, of which all tests are composed in various degrees. Thus, g is like an additional test beyond the most complex given test t_n (Guttman, 1954b, p. 269).

This initial ordering was essential for Guttman's scaling technique; with Spearman's hierarchy no such ordering was required. As previously stated, Spearman's theory produced a matrix (see Table 8) that descends as one goes down

or to the right of the upper left corner. The results of Guttman's theory can be seen to be quite different from what Spearman had found. Table 9 illustrates how Guttman's theory lead to a matrix in which the largest correlations all lie along the central diagonal, and taper off as one goes to the upper right and lower left of the table (Guttman, 1954b).

TABLE 9.--Test Intercorrelations for a Hypothetical Equally-Spaced, Perfect Simplex[a]

Test	Complexity	t_1	t_2	t_3	t_4	t_5
		.07776	.1296	.216	.36	.6
t_1	.07776	1.0	.6	.36	.216	.1296
t_2	.1296	.6	1.0	.6	.36	.216
t_3	.216	.36	.6	1.0	.6	..36
t_4	.36	.216	.36	.6	1.0	.6
t_5	.6	.1296	.216	.36	.6	1.0
Total		2.3056	2.7760	2.9200	2.7760	1.3056

[a]From Guttman (1954b, p. 271).

Not all matrices are as equally-spaced as the one shown in Table 9, "Test Intercorrelations for a Hypothetical, Equally-Spaced, Perfect Simplex;" in practice few reach this level of perfection. Table 10 illustrates the more common results, where the data do not form a perfect, equally-spaced somplex, but form a "Hypothetical, Nonequally-Spaced, Perfect Simplex." The tests are not equally-spaced in their complexity, but they still maintain the pattern

of descending scores as one proceeds further away from the central diagonal (Guttman, 1954b).

TABLE 10.--Test Intercorrelations for a Hypothetical, Non-equally-Spaced, Perfect Simplex[a]

Test	Complexity Loading	t_1	t_2	t_3	t_4	t_5
		.10	.12	.30	.85	.90
t_1	.10	1.00	.83	.33	.12	.11
t_2	.12	.83	1.00	.40	.14	.13
t_3	.30	.33	.40	1.00	.35	.33
t_4	.85	.12	.14	.35	1.00	.94
t_5	.90	.11	.13	.33	.94	1.00
Total		2.39	2.50	2.41	2.55	2.51

[a]From Guttman (1954b, p. 272).

"A set of tests whose observed intercorrelations satisfy the stated conditions of the hierarchy, will be said to form a perfect simplex. They have a simple order of complexity" (Guttman, 1944, p. 271). "In a perfect scale, each item is a perfect function of a single rank order of respondents" (Guttman, 1953b, p. 2).

Guttman (1954b) regarded Spearman's hierarchy as one in which the included tests have the same level of complexity. It was based on "the relative size of the communalities, or the saturations with the single-common-factor" (p. 318).

Thurstone's (1947) conception of simple structure was more closely related to Guttman's notion of circumplex

than to his notion of simplex. The 'simple structure concept,' an important contribution of traditional factor analysis, involved a situation in which the common-factors did not correlate at all with each other, as was the case with quantitative variables when using the circumplex. Guttman (1954b) stressed the point that new theories were based to a large extent on the contributions of previous theories.

In visualizing Guttman's simplex, it becomes increasingly clear just how important previous factor analytic theory has been to his new theoretical developments and modifications, evolving into a new facet theory approach.

> When Godfrey Thomson demonstrated that Spearman's type of hierarchy could tend to be accounted for by a theory of random sampling of 'bonds' in the mind, Spearman objected on the grounds that mental activity was certainly not random. Our (Guttman's) new theory is essentially one of 'ordered-bonds' in the mind; Thomson's bonds in a sense remain, and Spearman's objection to randomness is sustained (but Spearman's hierarchy is displaced from its previous central importance) (Guttman, 1954b, pp. 345-346).

Although Guttman (1954b) was somewhat critical of Thurstone's methodology, he saw more similarity between Thurstone and his facet theory analysis, than with other factor analytic theories. "The emphasis that Thurstone makes on patterns of zero factor loadings is reached in the additive forms of both the circumplex and the simplex. Had the notion of a simplex order been available before, one might have arrived at the radex theory via Thurstone's

approach" (p. 346). "We can now see that in a radex with empirically distinguishable simplexes, centroids of the simplexes will tend to be the reference axes of a Thurstone-type analysis. Thus, the number of common-factors found previously will tend to correspond to the number of simplexes employed" (p. 347).

Guttman (1953a) stated that his methods have "demonstrated that image theory is related to common-factor theory but has greater generality than common-factor theory, being able to deal with structures other than those described in a Spearman-Thurstone factor space" (p. 277). Guttman felt that image analysis encompassed the common-factor analysis propunded by Spearman and Thurstone.

Cluster analysis, propounded by Tryon, Cattell, etc., resembled both circumplex and simplex analysis. Although Tryon's (Guttman, 1954b) 'correlation profile' technique fit well in a short simplex, in the more lengthy tables, "the earlier and later parts will seem to form separate clusters because of the smaller correlations in the northeast and southwest corners of the correlation table" (p. 347). The research performed by Cattell came close to the simplex proposed by Guttman, but Cattell failed to make a distinction between kind and degree.

In a 1954-1955 article, Guttman mentioned possible extensions of his simplex, circumplex, and radex theories into the realm of attitude research. "One of the most

surprising and profound properties of a perfect scale is that while on the surface it represents but a simple ranking of people -- more deeply it reveals a whole series of underlying components of the attitude" (p. 400). Guttman continued to cite the need in attitude research for the scaling of attitudes along a simplex from 'most complex' to 'least complex' as a method of improving psychological investigation and computing techniques, over the previous analytic approaches.

Guttman was of the belief that there was definitely a structural analysis underlying content areas and that it was the job of the social scientist to seek out these underlying structures, where they existed. The method he advocated for discovering these foundations was facet analysis of the sub-universes. Certain subuniverses were statistically closer to other subuniverses, while some were more distant. These could be aligned in the hierarchical simplex in order that they specify the empirical correlations underlying the definitions. The more exact that this analysis became, the better the frame-work was. "Comprehension of the multivariate system of the universe can lead to larger theories of relations with other universes, and thus to more and more perfect multiple correlations for each variety of behavior separately" (Guttman, 1959, p. 318).

Cattell (1964) in regard to simplex analysis, related that the concept of simplex had been used widely in

scientific endeavors and classically expressed by Newton as "natura est simplex.' In more modern usage this concept involved choosing the model (or theory) that gave the best fit and was at the same time simpler in terms of data relations, mathematics, and logic. Cattell stated that the aim of simplex analysis was to find scales that would maximize prediction of certain statistical relationships.

Borgatta (1958) noted that a primary advantage of data arranged along a simplex design, was that as one studies the scores down the central diagonal, one can view the transition in meaning of the items "as they are saturated in two different contents" (p. 525). If the items chosen were relatively independent of one another, good factor definitions would not result; if all of the items were totally independent of the other items, common factors would not be found and all the intercorrelations would be zero.

According to Foa (1958) one of the most important characteristics of facet analysis was that it contributed to the understanding of the structural pattern of contents; facet theory attempted to show that changes in a given area depended on changes taking place in the areas immediately neighboring it. It attempted to provide a description of the phenomena that take place and the psychological dimensions underlying them.

Foa (1958) discussed model building as the first step in facet analysis; selection of the facets should be

made so that they are relatively independent of one another and yet logically consistent. This he referred to as the "principle of logical independence of the facets" (p. 230). Each combination of facet categories should make logical sense. Foa gave an example using two facets, i.e., sex (male/female) and motherhood/non-motherhood. He stated that these two facets were not logically independent because the combination of male/motherhood was not logically possible.

Although it is important to have the facets of a scale logically independent, more proof that the facets are indeed the appropriate facets for the design is necessary. "A more conclusive indication of the adequacy of choice consists in finding a certain parallelism between the pattern of conceptual contiguity and the pattern of statistical dependence" (Foa, 1958, p. 230). In other words, parts of similar composition should be related more clearly than parts of dissimilar composition. When this does not occur, and if the parts of dissimilar facet composition are more closely related than are those of similar composition, there is a good chance that there is some additional, underlying facet in the model that has escaped notice and has been omitted from the scale. "These considerations can be summarized in the principle of contiguity stating that: conceptual contiguity is a necessary condition for statistical dependence" (p. 230).

Guttman considered himself a disciple of both Spearman and Thurstone. In tracing the concept of simple structure, Guttman credited both Spearman and Thurstone for developing the primary notions leading to the concept of simplex. "It is a historical fact regarding the evolution of ideas that the origins of property, facet, and aspect analysis happened to lie in the early quantitative factor analytic developments, though they could have been developed quite independently as a purely logical system" (Guttman, 1966, p. 444). Guttman noted that when Spearman first began his work, that eventually lead into 'order' analysis, the statistical means of multivariate analysis were not yet developed. This impeded the development of the statistical approaches that Guttman was able to facilitate soon after the new techniques became available.

Guilford (1954) suggested that patterns of observed correlations could be predicted if the underlying facet design of the test is understood. Later, Guttman developed the theoretical, methodological concept of 'radex' to explain the relationships of ordered facets. Thus, Guttman's concept of 'radex' came from Guilford's discovery that a test with a profile in which there is only one level reversal will have a higher correlation than tests with more than one level reversal (Guttman, 1958, p. 512). "It is this kind of property (radex analysis) that can lead to parsimonious but highly successful prediction of external criteria"

(p. 512). Guttman (1954b), through simplex and circumplex analysis, has shown how this 'law of parsimony' can be applied to a variety of empirical testing of different content areas (Ben-Sira & Guttman, 1971; Guttman & Schlesinger, 1966).

In attempting to apply his theory to practical problems of society, Guttman (1944, 1954b, 1959) employed the theory of radex and the 'law of parsimony' to the empirical domains of intelligence and racial attitudes. In the late 1960's and early 1970's, further application of this theory was undertaken as Jordan and others extended the simplex theory to other attitude content areas such as mental retardation (Jordan, 1970; Morin, 1969), racial-ethnic attitudes (Hamersma, 1969; Dell Orto, 1970; Frechette, 1970; Jordan, 1971b; Jordan 1972a; Bray, 1972), and drug addiction (Kaple, 1971; Nicholson, 1972).

Green (1954) stated that in 1944, Guttman provided a new departure for the analysis of attitude research. Through the scaling of monotone attitude items, Guttman provided a demonstration of cumulative scaling. For an individual taking the scale, if he responds positively to one level on the scale, he should also respond positively to the scale items above that particular level (see Table 11).

There were previous studies using similar scales (Bogardus, 1925; May and Hartshorne, 1926), but as a general method of scaling, they were in the main ignored. "It was

TABLE 11.--Scalogram Diagram for Three Dichotomous Items[a]

		Items		
		3	2	1
Individuals (scale types)	1	+	+	+
	2	-	+	+
	3	-	-	+
	4	-	-	-

[a]From B. F. Green (1954, p. 354).
+ indicates a positive response
- indicates a negative response

Guttman who advocated the use of such cumulative items as a basis for a formal method of scaling. His development of scalogram analysis stimulated widespread interest in the method" (Green, 1954, p. 353).

Guttman (1944) believed that any system involving the use of scalogram analysis techniques had the advantage over other systems where it was only possible to think of the variables in terms of clusters of unknown factors. Using the system of scalogram analysis, the variables could be placed along a single continuum of interest.

In a more thorough analysis of scalogram techniques, Guttman (1950a) stated the basic theory underlying his system. Scalogram analysis is utilized to answer two basic questions: "(a) the determination of unidimensionality and (b) the determination of a fixed point of reference along such a single dimension" (p. 46). For measurements to be meaningful they must lie along one plane of analysis in

which a fixed point can be determined. Scale analysis (or scalogram analysis) serves as a method for locating qualitative data along such a single plane, thus making it unidimensional. The intensity function gives the data the single anchoring point for the analysis.

Scalogram research is based on the following definition of a scale: "It requires that each person's responses shall be reproducible from his rank alone. Each item shall be a simple function of the person's rank" (Guttman, 1950b, p. 62). When this requirement is fulfilled the two other prominant definitions of scales are also fulfilled. That is, "within each item, if one response is higher than another, then all people in the higher category must have higher scale ranks than those in the lower category" and the second definition that "a person with a higher rank than another person is just as high or higher on every item than the other person" (p. 62).

Scalogram theory asserts that for any particular sample of questions taken from the universe of scaled items will result in the same rank ordering of individuals. Scale analysis does not attempt to define the content of an area, but rather assumes the content is already defined and tests for representation of the variable in question (Guttman, 1950b).

Guttman (1950b) stated that scale analysis can be used for any universe of qualitative attributes, in any

science, and through any method of observation. It is especially suited for areas such as attitude measurement and public opinion (Ben-Sira & Guttman, 1971) where methods for determining methodologically significant data have been largely lacking. Scale analysis provides means of selecting items in a large sample of questions that are representative of the particular unidimensionality of the scale constructed. That a rank order of subjects can be established for material that is qualitative in nature is especially significant. By means of scalogram analysis, qualitative data can be interpreted through quantitative means; the qualitative variable is given quantitative significance "such that each attribute in the universe of attributes is a simple function of that quantitative variable" (p. 88). In essence, any form of data derived from observation (questionnaires, participant observation, interviews) can be subjected to scalogram techniques.

Scale analysis is suited for single-factor analysis of qualitative data, whereas factor analysis is more useful for the study of quantitative data. Factor analysis cannot test the scalability of qualitative variables. In the Spearman-Thurstone tradition of factor analysis, it was not designed to detect if a set of dichotomies forms a scale.

Jordan has been using facet theory in his research at Michigan State University; at first, starting out with faceted definitions of the universe of attitudes toward the

mentally retarded, secondly, expanding this to include attitudes toward the mentally ill, and finally expanding it to other 'personal' attitude object groups, such as race, drug users, and the war disabled. Currently, he is exploring the model to study attitude-behavior toward 'conceptual' attitude objects such as: the role of women, technical education, educational change, the environment, and population problems.

Guttman (1953a) stated that his methods have "demonstrated that image theory is related to common-factor theory but has greater generality than common-factor theory, being able to deal with structures other than those described in a Spearman-Thurstone factor space" (p. 277). Guttman felt that image analysis encoumpasses the common-factor analysis propounded by Spearman and Thurstone.

It was with the work of Jordan and his colleagues that Guttman's structurally precise facet technique and conceptions concerning attitudes, were fused together into an evolving theory of attitude-behavior structure and measurement, with its implicit implications for attitude-behavior change.

Theoretical Developments in Attitude-Behavior Research

As was stated earlier in this paper, Jordan's attitude research involves a combination of two separate streams of thought in psychology. His work involves a

combination of rigorous semantic and methodological analysis encompassed within an empirical, theoretical, and descriptive tradition. In synthesizing these two approaches, he is attempting to explain attitude-behaviors through a facet-design approach. The semantic-structural segment of this analysis involves use of the facet theory of Guttman and his predecessors; the empirical-descriptive analysis he uses is discussed in the following section.

"Many authors, past and present, would agree that the interaction of individual minds produces a common manner of thinking, feeling, and willing, different from that of single minds in isolation, or from the mere summations of minds" (Allport, 1954, p. 31). This distinction between thinking, feeling, and willing, is crucial in the analysis of Jordan's attitude-behavior research.

The beginning of this three-phase analysis of attitude, that of cognition, affection, and conation, can be traced to the time of the early Greek philosophers. "Plato . . . conceived of the mind as made up of three facilities or 'institutions.' To Plato abdomen was the seat of emotions or feeling; the breast the seat of striving and action; the head the seat of reason and thought" (Allport, 1954, p. 19). Allport (1954) stated that this trichotomy has persisted to the present time; the terms have been modified by different writers, but the meaning has been retained. Plato had classified 'mind' into:

affection (feeling), conation (striving), and cognition (thought).

Fechner was one of the first psychologists to use attitude scaling in the scientific framework. As Chaplin and Krawiec (1968) stated, his "methods have stood the test of time to become fundamental procedures in psychophysical measurements, mental testing, and attitude scaling . . ." (p. 40). Titchener, a student of Wundt, brought the new, rigorous experimentation to the American continent from Europe. He analyzed consciousness into three basic elements - sensations, images, and affective states. In general, Wundt's followers stressed the importance of feelings in analyzing attitudes. Clarke, a student of Titchener, broke attitude into three conscious phenomena: imagery, sensation, and affection. This 'new' psychology of structure concentrated on the operations and function 'within' the organism alone.

It was necessary for another aspect, that of interaction between the subject and the object, to be developed before the work of attitude-behavior research could mature. The British act psychologists, James, Ward, Dewey, Angell, and Carr were the first to study the interaction between the observer and the observed. Later, in America, Cooley and Mead took up the act psychologists' interest in the subject-object relationship, and developed the early group

psychology approach by studying the interactive system between two or more subjects.

Thomas and Znaniecki, in a 1918 publication, defined attitude as: "individual mental processes which determine both the actual and potential responses of each person in the social world." Further, they defined a social value as "any datum having an empirical context accessible to the members of some social group and a meaning with regard to which it is or may be an object of activity" (Allport, 1954, p. 45).

Ward (1920) developed an elaborate system centered around the relation of the active subject to the object. He divided the subject matter of psychology into cognition, feeling, and conation.

A predecessor of Ward, James Sully (1892), attempted to classify and divide various mental states into distinctive modes of human expression. The three modes that he conceptualized were feeling, knowing, and willing. Sully gave an example of these three states; it is clear in this example that Sully's analysis involved all three characteristics of attitude: cognition, feeling, and action. Many psychologists following him with more experimental-type work fail to include the conative element. Even when the researcher includes this element, the actual behavior of a subject toward an object is selfom enumerated. Although Sully's work was purely descriptive, he did contribute to

empirical research by emphasizing the importance of recognizing the three separate and distinct elements of attitude:

> To illustrate the difference between these modes of mental manifestation, we may select almost any example of a familiar mental experience. For instance, I see an apple on a tree. I may be affected by the beauty of its colour glowing in the midst of its cool green surroundings. Such a mental state of delightful admiration would be properly described as a feeling or affective state . . . Or, again, if I happen to be a connoisseur of apples, my mind may be stimulated by the sight of the object to note its peculiar variety to which it belongs. Such a direction of mental activity would come under the head of knowing, cognitive process or intellection . . . And, lastly, if I happen to be hot and thirsty the sight of the apply may very likely excite a desire to pluck and eat it and prompt the corresponding actions. And in this case what goes on in my mind would be a case of willing, volition, or conation. All mental processes lie under one of these heads (Sully, 1892, Vol. I, p. 60).

Sully's (1892) classification of mental processes into three separate categories can be compared to McGuire's (1969) more recent classification of these three elements as basic to attitudes. Under Intellection (McGuire-cognition), Sully included such things as: perception, memory, and thought. Under Feelings (McGuire-affection), he included: feelings (i.e., pleasure and pain), emotions (fear, sympathy, intellectual or logical feelings, aesthetic sentiment, ethical or moral sentiment). Finally, under Conation or Volition (McGuire-conation), he included: voluntary movements, desire, and habit.

Ward (1920, p. 56) anticipated Jordan's analysis of attitude-behaviors. He included the three elements of attitude, which he referred to as the three 'commonly

accepted constituents of experience,' in what appeared to be an elementary design of Jordan's mapping sentence, using the crucial subject-object relationship:

A SUBJECT { (1) non-voluntary attending to changes in the sensory continuum; (Cognition) } = Presentation of sensory
A SUBJECT { (2) being, in consequence, either pleased or pained; (Feeling) }
A SUBJECT { (3) by voluntary attention or 'innervation' producing changes in the motor-continuum. (Conation) } = Presentation of motor
} OBJECTS

Ward (1920) postulated that the important contribution of this system was that it "traversed both the old bi-partite and the prevailing tripartite schemes, viz. that between the subject, on the one hand, as acting and feeling, and the objects of this activity on the other" (p. 56). McDougall also used the subject-object-activity continuum in more experimental research (Boring, 1950).

Allport (1954) indicated that 'attitude' has had more than one meaning through its historical perspective. There have been two prevalent, and at time opposing definitions of attitude: one meaning, stressing mental attitude and one, motor attitude or in Jordan's terms, one stressing "predisposition" and the second stressing "overt action" or behavior. The definition of attitude as mental activity preceded the one in which attitude was given motor

significance. The earlier definition perceived attitude as "a subjective or mental state of preparation for action." Spencer, one of the first psychologists to use the term 'attitude' wrote in First Principles, published in 1862:

> Arriving at correct judgments on disputed questions, much depends on the attitude of mind we preserve while listening to, or taking part, in the controversy; and for the preservation of a right attitude it is needful that we should learn how true and yet how untrue, are average human beliefs (Allport, 1954, p. 43).

It was not until somewhat later that the conception of attitude as an activity began to appear. In the late Nineteenth Century, N. Lange (1888) spoke of attitude referring to perception as resulting from muscular preparation or 'set.' Concurrently with this, Munsterberg (1889) and Féré (1890) developed theories that centered around motor and action type attitudes. Wundt and Titchener's contributions occurred shortly after this. "As a result of the Wurzburg work (primarily Titchener and Wundt) most psychologists came to accept attitudes, but not all believed them to be impalpable and irreducible mental elements. The students of Titchener felt that attitudes were feelings. Prior to this, the Wurzburg school attempted to use introspection to resolve the meaning of attitude" (Allport, 1954, pp. 43-44).

Attitudes were really not well represented or accepted until the time of Freud. He endowed attitudes with vitality, equating them with longing, hatred and love, with

passion and prejudice, in short, with the onrushing stream of unconscious life" (Allport, 1954, p. 44). With this analysis, plus the beginning of experimental investigation of attitude, attitude received a permanent place in the field of psychology. Credit must be given to Thomas and Znaniecki (1918) for giving attitude a permanent place in the field of sociology and sociological analysis (Allport, 1954).

In the early part of the Twentieth Century, researchers began propounding definitions of attitude that in the main included both the thinking processes of attitude and its motor aspects. Allport (1954, p. 45) cited the following as typical definitions of attitude at about this time:

> Attitude = the specific mental disposition toward an incoming (or arising) experience, whereby that experience is modified; or, a condition of readiness for a certain type of activity (Warren, 1934).
>
> An attitude is a mental disposition of the human individual to act for or against a definite object (Droba, 1933).
>
> An attitude is a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related (Allport, 1935).

The Conception of Attitude as Attitude-Behavior

Hamersma (1969) stated that a major problem with measures of social attitude was that they were not consistent with actual overt behavior. In his review of the literature of studies concerned with racial attitudes, he noted that

most studies had dealt with 'stereotypic' attitudes and rarely deal with an individual's actual behavior in real-world situations.

Guttman (1950a) has operationally defined attitude as "a delimited totality of behavior with respect to something" (p. 51). When attitudes are thus defined, items in an attitude scale can be constructed to yield information concerned with an individual's actual overt behavior and experience; this should link 'attitudes' and 'behaviors,' eliminating much of the criticism previously leveled at attitude studies for failing to do this.

Jordan (1971a) stated that there were two views that permeated the literature on attitudes and attitude research. The first, defined attitude as "predisposition to behavior;" the second emphasized attitude as 'behavior.' Jordan's definition involved use of the hyphenated term "attitude-behavior," and related directly to Guttman's definition of attitude as being "a delimited totality of behavior with respect to something." According to Jordan (1971a), this definition of Guttman's "is consonant with a structural (Foa, 1966, 1968; Foa and Turner, 1970) approach to the facet analysis of attitude-behavior" (Jordan, 1971a, p. 7).

> The facet theory approach fits within the positivistic definition developed by McGuire (1969, p. 45) and facilitates a cognitive-affective-conative (knowing, feeling, and acting)analysis of the human condition. In the paradigms developed in

> Tables 3-6, (i.e., Tables 16-19 in Chapter V), Level 1 and 2 deal with the cognitive component, Level 3 with the affective component (evaluation), Levels 4 and 5 with a combination of affective and conative components, and Level 6 with the conative aspect. In Rokeach's (1968) belief-value-attitude analysis it could be argued that Level 1 and 2 deal with beliefs, Level 3 with values, and Levels 4-6 with attitudes. Such a system of attitude-behavior levels facilitates an analysis of the interrelationships of the cognitive-affective-conative trilogy as well as highlighting the usefulness of the conative aspect (i.e., Level 6) as the criterion measure of attitude (Jordan, 1971a, p. 7).

McGuire (1969) discussed the extensive use of the three divisions of attitudes, the cognitive-affective-conative analysis. This trichotomy arose out of the existential, philosophical thinking that man can take basically three stances to human life: knowing, feeling, and acting.

McGuire (1969) defined the cognitive (perceptual, informational, or stereotypic) component of attitudes as how an individual perceives the particular object of the attitude. It is the conceptual connotation that the person gives the object, the 'stereotype' he has of it. Scott (1968) defined this component as "the 'richness' of the ideational content, or the number of ideas the person has about the object" (p. 207). An individual's liking or disliking of an attitude object is considered the affective (feeling or emotional) component of attitude. This measure, an individual's affect-laden or evaluative content toward the attitude object, is labelled by Scott as affective salience. An individual's behavioral, motor,

or action tendencies toward the object of the attitude is the conative (action, behavioral) component of attitude. Scott called this dimension the overtness of the attitude and states that it "implies the overt enactment of an attitude is at least partly attributable to characteristics of the person" (p. 207).

McGuire felt that the conative component may be the crux of attitudes, since it is intended to measure actual behavior of an individual. A problem arises in measuring this dimension. Like the other two components, the method of analysis usually chosen is the "paper-and-pencil inventory which indicates how the person says he would behave in the presence of the object, rather than by observation of how he actually behaves" (p. 156). Past research indicates there is often a low correlation between what a person says he does and what he actually does. McGuire suggested that further research might attempt to get at actual behavior of the subject rather than self-reported behavior, to improve the validity of the measurement of this highly important component.

"An attitude, according to Allport's 1935 definition, had at least five aspects: (a) it is a mental and neural state, (b) of readiness to respond, (c) organized, (d) through experience, (e) exerting a directive and/or dynamic influence on behavior" (McGuire, 1969, p. 142). This definition encompasses the three components of attitude

(cognitive-affective-conative) postulated by McGuire (1969) and applied by Jordan (1971a).

> Elaborations and variants on psychometric theory stem from factor analysis (see Cartwirght, 1964; Cattell, 1961) and from the recent concern with "moderator variables" (Ghiselli, 1956, 1960; Saunders, 1956). Alternative models of measurement have been proposed, such as Guttman's (1944, 1950) model of ordinal scaling, Guttman's (1953, 1960) image theory, Lazarsfeld's (1950, 1960) latent structure model, and Coombs's (1953, 1964) theory of data. But aside from Guttman's ordinal scaling procedures, none of these models has found wide application to attitude assessment. This may be due, in part, to the belief that the rather laborious procedures for data collection and analysis associated with them are unlikely, under present circumstances, to yield commensurate gains in precision and validity. If this belief is justified it does not necessarily inpugn the models. Quite possibly the fault lies in our imprecise conception of attitude or in the laxness of our requirements for validity. If these were more stringent, it is possible that alternative models could be demonstrated superior to classical psychometric theory (Scott, 1968, p. 209).

Scott (1968) stated that attitude is a hypothetical construct and because of this, cannot be measured directly. It must be inferred from the subjects' responses. In deriving a theoretical definition of attitude, Scott (1968, p. 251), cited seven measures that he regarded as important and crucial dimensions:

1. It would reflect the intended property veridically.
2. It would be unaffected by irrelevant characteristics either within the subject or within the testing situation.
3. It would not modify the property in the course of measuring it.
4. It would make sufficiently fine distinctions among persons to represent gradations along the dimension as conceived.

5. It would yield results substantially equivalent to those produced by another adequate instrument measuring the same property.
6. It would yield equivalent scores on a retest administered within a time period in which the property can be assumed to remain constant.
7. It would be relatively easy to construct, administer, score, and interpret.

"Ideally, one would like to have precise, quantitative indices for each of these criteria, in order to compare available instruments and to guide the construction of improved instruments" (Scott, 1968, p. 251).

> The construct attitude has become so complex that one can no longer talk clearly about "measuring an attitude". Rather, one must restrict discussion to procedures for measuring a particular property of an attitude as conceptually defined. Whether this degree of theoretical complexity in the construct should be tolerated is a matter of some concern. One might hope that future conceptualizations will distinguish different constructs for many of the properties now subsumed under the single term (Scott, 1968, p. 265).

Kothandapani (1971) investigated the cognitive-affective-conative trichotomy toward the prediction of contraceptive behavior. In her review of previous findings, she found few studies expressing a significant relationship between attitude and behavior. Three reasons were postulated by Kothandapani for this omission. Many of the studies defined attitude simply as affect. Although Kothandapani agreed that affect does play a large part in attitude, she felt that it was not the sole component. A second reason given for her belief in the lack of an association between attitude and behavior was that often the researcher is measuring attitude toward an inappropriate

stimulus. Thirdly, the instruments used to measure attitude were often inappropriate or defective.

In her present study, Kothandapani (1971) has attempted to discover additional evidence for the converging and discriminating entities of what she viewed as the three components of attitude: (a) feeling, (b) belief, and (c) intention-to-act. The first two, feeling and belief, were the cognitive and affective elements. The behavioral component was defined as 'intention-to-act' or 'behavioral intention.' Her definition took into account behavior in hypothetical situations; Kothandapani believed that this would be more powerful measure to predict behavior.

Intention-to-act was considered the most predictive of the three elements of behavior, since 'intention-to-act' and 'behavior' seem to share the most common determinants. Kothandapani (1971) reported: "the hypothesized convergent and discriminant validities of the tripartite classification of attitude into feeling, belief, and intention-to-act components were confirmed in this study" (p. 331). The intention-to-act measure proved to be a better predictor of behavior than either of the two other measures. She felt that this was the reason most other studies, which dealt primarily with cognitive items and not measures of intention-to-act, failed to predict behavior.

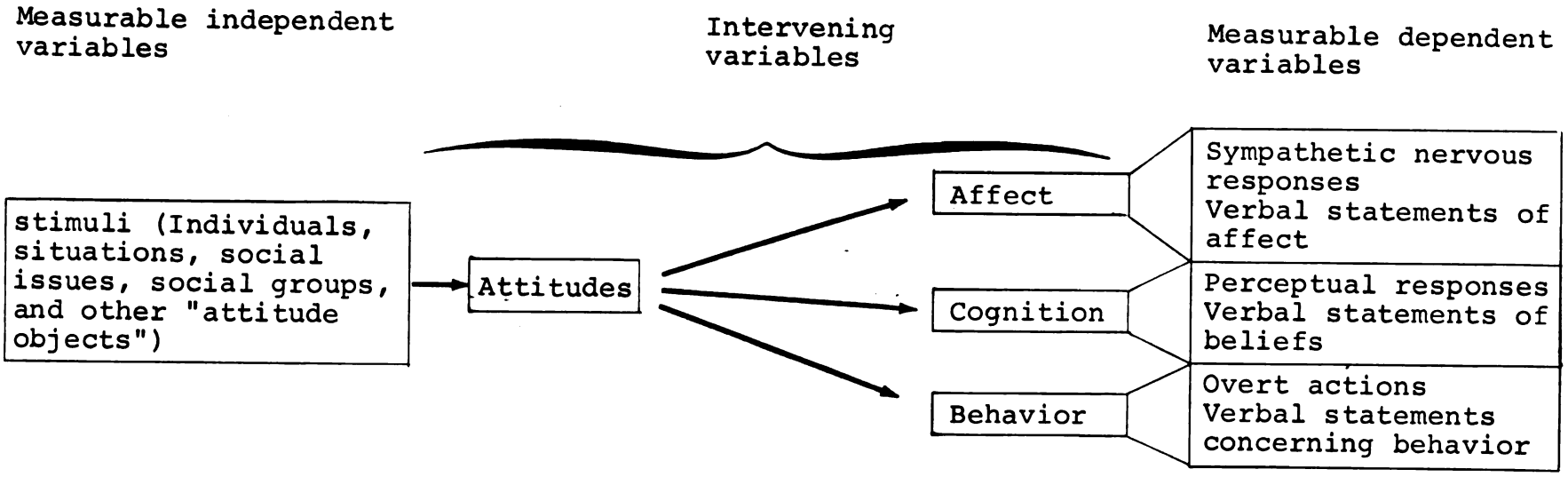
Kothandapani (1971) viewed the tripartite distinction from the point of view of learning theory. The feeling

component was seen as the conditioned stimulus, while belief and intention-to-act constituted the discriminant stimuli. Thus, the tripartite division of attitude could be placed in the stimulus-response language of behaviors. "Performance of an act may be considered a function of learned intentions, beliefs, and feelings in combination with current stimulus conditions" (p. 332). In behavioristic terms, the feeling element was seen as stimulating or inhibiting performance, the belief division in forming stimulus-response-reinforcer relationships, and the intention-to-act element as an organizer of the feeling and belief input to the behavioral output. Kothandapani saw this functional approach to the feeling-belief-intention-to-act system as accounting for the superior predictive power that she found for the intention-to-act component.

Another representation of the tripartite classification of attitude, is illustrated on page 91, where attitudes are broken down into measurable independent variables, intervening variables, and measurable dependent variables (Rosenberg and Hovland, 1960, p. 3).

Guttman, in 1959, proposed a structural theory for inter-group behavior. This was perhaps the first step in the union of structural theory and applied behavior. In regard to structural theory, Guttman discussed some of the reasons he felt that empirical correlations do not form perfect relationships with one another. He stated that

SCHEMATIC CONCEPTION OF ATTITUDES



there are many subvarieties of behavior and that these subvarieties had been lumped together in most applied attitude research, producing an intermingling of categories which should have been considered distinct entities from each other.

It is also the task of the social scientist to discover the structure underlying the totality of behavior. The relationships between subuniverses of behavior must be discovered, so that each separate behavior class may exist independent of the others. The total structural system, including all these subcategories of behavior will be called the universe, each subcategory of behavior by itself representing a subuniverse of subvariety of the universe of behavior. Certain subcategories of behavior will be more closely related to one another than others and some less related. "A task of the social theorist is to provide an abstract framework whereby to define the subuniverses: the more adequately it explicates the empirical correlations that ensue among the definitions, the better the framework" (Guttman, 1959, p. 318). Guttman's three-facet, four-Level system was an attempt to provide this basic framework. Improving the empirical correlations among the Levels is what Jordan has attempted to do, by adding two Levels and two facets and refining the items in the scales he has developed. "Comprehension of the multivariate system of the universe can lead to larger theories of relations with

other universes, and thus to more and more perfect multiple correlations for each variety of behavior separately" (Guttman, 1959, p. 318). Jordan has been attempting this with his Attitude Behavior Scales. The first scale involved the mentally retarded as the attitude object.

Summary

Guttman (1959) noted that "proceeding from a semantic structure to a statistical structure appears necessary in order to relate abstract social theory to empirical research" (p. 319). This was what Guttman attempted; his conceptualizations were based on strict, methodological rigor founded on developments following the factor analytic techniques of Spearman and Thurstone. Through semantic restructuring of the variables in Bastide and van den Berghe's (1957) research, he rearranged the design and applied statistical analysis to the data. Bastide and van den Berghe's work was consistent with the cognitive-affective-conative analysis dating back to early Greek philosophy. Jordan (1968) found the system lacking especially in the 'conative dimension' and somewhat in the 'affective domain;' thus, he extended the four levels to include a more comprehensive view of the cognitive-affective-conative trichotomy.

Guttman's "continguity hypothesis" proposed that variables of Levels with more similar facet elements are

more related than those with less similar elements. Levels closely related to one another may form a hierarchical relationship or simplex. The interrelationships among variables will be posited by the hierarchical order among the facets (Foa, 1968).

Guttman (1967) proposed the following faceted definition of varieties of racism:

"Racism = $\left\{\begin{matrix}\text{(belief)}\\\text{(action)}\end{matrix}\right\}$ that the $\left\{\begin{matrix}\text{(individual's)}\\\text{(individual's group)}\end{matrix}\right\}$ behavior of a $\left\{\begin{matrix}\text{(comparative)}\\\text{(interactive)}\end{matrix}\right\}$ nature vis-a-vis another group it regards as racially different from itself $\left\{\begin{matrix}\text{(ought to be)}\\\text{(actually is)}\end{matrix}\right\}$ unfavorable to the group presumed to be racially different."

"To increase the predictablity would require enriching the facet design (i.e., of the previous varieties of racism), or placing these behaviors in a larger context" (Guttman, 1959, p. 327). Chapters III and IV explore racism, prejudice, and color-labelling as prerequisite to developing a more complete facet design, in Chapter V, for the study of racial attitude-behaviors.

CHAPTER III

RACIAL ASPECTS OF PREJUDICE

> Racism is not a new phenomenon. Men have long tried to identify themselves not only as individuals but as members of social groups; and to set up viable social groups, they have thrust others out. These 'others' have been differentiated in various ways, for instance, according to clan, tribe, nation, estate, or class. The forms change, but the process of self-definition is seemingly endless. And all these 'others' have one feature in common: they are never quite as good as the self. Some mysterious tag of devaluation is attached to the other person as his essential point of distinction from the groups of selves (Kovel, 1970, pp. 13-14).

Introduction

This chapter discusses how racial aspects of prejudice relate to race labelling, language, and the cognitive, affective, and behavioral aspects of attitude. There is a definite interaction between race labelling and prejudice; research indicates that both contribute to the negative images white people have for blacks. The exact relationship between racial labelling and prejudice is still vague. To understand race prejudice, recent theories have attempted to analyze attitude through division into its three component levels: cognitive, affective, and behavioral. The historical origins of this tripartite classification were discussed in Chapter II. Jordan's (1971a) research is one

of the sole theories to posit a tripartite attitude theory that also instruments a statistical analysis of these three components. The present study is an attempt to relate Jordan's theory to research begun by Williams (1964, 1966, 1969) on racial concepts and language.

Race Labelling

One major outcome involved in the process of 'race labelling' is the process of creating a stereotype. As will be evident in the following discussion, not all 'race labelling' creates stereotypes, but a large proportion of it does. Vinacke (1956, p. 107) defined stereotyping as "a tendency to attribute generalized and simplified characteristics to a group of people in the form of a verbal label." The black man in the United States has been given a label as 'black,' 'dark,' 'colored,' 'Negro' at various times in the history of this country. With many of these labels has come negative connotations, negative stereotypes that have accompanied these labels. These labels carried with them society's attempts to devalue the ability, power, and prestige of people so labelled. As one observer noted, blacks "discovered that their determination to do the right thing had blinded them to the wrong thing 'the man' was doing, as he suggested to them how important it was to be a good 'Negro' teacher or a very fine 'Negro' social worker or psychologist or psychiatrist." In large part, black people failed to see

the true meaning given the adjective 'Negro' and the decreased value that had been placed upon it (Grier and Cobbs, 1971, p. 129).

M. B. Smith (cited in Baughman, 1971) felt that the word and category 'Negro' is an American creation, closely associated with the slave period. The term does not describe nor fit blacks in Africa, and he suggests that black Americans should refrain from using the term, and that white Americans do likewise. The term 'Negro' was imposed upon black individuals, whereas the label 'black' was a self-chosen one, one that connotes respect and pride.

In a study conducted in 1968 on the South Side of Chicago, blacks preferred the term 'Negro' to other options, such as 'black,' 'Afro-American,' and 'colored' (Baughman, 1971). However, Baughman felt that the younger, more articulate, and more militant blacks prefer to be called 'black' rather than 'Negro;' the term 'Negro' is often seen as a label imposed upon blacks by the white society, instead of a voluntarily chosen one.

Baird (cited in Bennett, 1967) objected to the use of the word 'Negro' because of its slave orientation and involuntary imposition and its lack of geographic or cultural specificity. Moore (cited in Bennett) agreed that blacks should not be referred to as Negroes; he felt 'Negro' was odious and filled with negative stereotypes. 'Black,' he felt, was a more positive concept than 'Negro,'

but was still associated with negative connotations. Closer identification with African culture and heritage seemed to be the next step that both Moore and Bennett would desire. The most appropriate term to use would seem to be the one that is most voluntarily chosen and desired by blacks.

The word 'Negro' was not fully accepted as the designation for black people until early in the Twentieth Century. Acceptance of it was very slow until that time, but after it became accepted, there was little opposition to the term from either blacks or whites. The NAACP, founded in 1909, chose the term 'colored' over 'Negro' (Ebony Photo-editorial, 1968). Recently, pressure has been put on the NAACP by black power advocates to change its name to NAABP--National Association for the Advancement of Black People.

A survey was conducted by Ebony magazine during 1967-1968, to examine the choice of a term by subscribers of the magazine. Although the authors stated that the study in no way involved scientific sampling, the results were interesting. Of the 2000 people who responded (one-tenth of one per cent of Ebony readers), 48 percent preferred the term 'Afro-American;' 23.3 percent preferred 'black;' 12 percent preferred 'African American;' 8.1 percent preferred 'Negro' and 3 percent preferred the choice 'colored' (Ebony Photo-editorial, 1968, p. 164). This survey indicated that blacks definitely do not prefer the term 'Negro' any longer.

Jordan (1971a) and Hamersma (1969) felt that presently the black community prefers use of the word 'black' over 'Negro.' They constructed Attitude Behavior Scales for measuring racial attitudes of blacks and whites toward each other. The scale given to blacks, measuring their attitudes toward whites, uses the word 'black,' while the scale given to whites and measuring their attitudes toward blacks, contains the word 'Negro' instead of 'black' as the attitude object. Jordan and Hamersma (1969) explained that this procedure was followed because of general acceptance of the word 'black' in the black community, while the white community still seemed more familiar with the term 'Negro.' At least for college students, it would appear that the term 'black' can now be used in testing white populations; the black power movement has aided in familiarizing white college students with its use.

Williams and Kirkland (1971) differentiated between the words 'black' and 'Negro' (see Chapter I, Introduction, pp. 6-7). Further comment on the 'black' versus 'Negro' versus 'Afro-American' controversy follows the Williams and Kirkland discussion (through p. 9).

Dubois (1961) commented on the internal struggle of black identification: "one even feels his twoness--an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body whose dogged strength alone keeps it from being torn asunder."

According to Lester (1968, p. 92), "blacks now realize that 'Negro' is an American invention which shut them off from those of the same color in Africa. They recognize now that part of themselves are in Africa. This new identity is an attempt to replace and recreate ideals that had been lost to them . . . they have stopped being Negroes and have become black men, in recognition of this new identity" (Lester, 1968, pp. 91-92).

Review of literature indicated that although there was disagreement as to what term to use, most studies agreed that the term 'Negro' was no longer an appropriate label to use. The terms presently preferred were 'Afro-American' and 'black.' The associations of 'Negro' with slavery were evident; voluntariness of choice is important in the choice of the most appropriate label for a people.

As Campbell (1971, p. 1) has found, "there is no simple way to describe white attitudes toward black people. In the past, when slavery was present, it was possible and probably predominant for white people to have a common, stereotypical image of blacks. With the emergence of the Black Power Movement, encompassing the concept of black pride and capability, it is no longer possible for whites to look upon blacks as all similar. From daily observation, this conclusion by Campbell must be questioned. Many whites still see blacks in a stereotypical manner. This may be less true in the cities, but in rural areas where contact

with blacks is minimal, whites quite often stereotype blacks and their behavior.

In an analysis of attitudes of whites toward blacks, Campbell (1971) found a great variety of attitudes concerning race. About 25 percent of the people surveyed were generally positive in their attitudes about blacks, 25 percent were generally negative, and the rest were somewhat between the two polarized groups. The most positive change in attitude they found was in those individuals who had attended or were attending college. College students' (those individuals who had attended college within the past twenty years) views had become quite different from their parents' views. Campbell speculated that this change was due, in part, to a liberalization of views brought about with the New Deal politics, the growing importance and interest in the social sciences, and the social changes brought about by the Depression.

In their report, the Kerner Commission stated the belief that this country is moving toward two separate societies, one white and one black. Campbell (1971) felt that this was not necessarily true; he found many instances where white and black were moving closer together. In the reports from the Institute for Social Research at the University of Michigan, no dramatic changes were found in feelings of the two racial groups toward each other. Rather, they found an increase in racial contacts, more

persons of both races indicating that they had friends of the other race. Although there was some moving apart, they concluded that, in general, whites and blacks had not begun to establish two split societies or philosophies. One thing to be emphasized, however, is that there were great differences and prejudices between blacks and whites that both races must attempt to solve.

The most consistent changes Campbell (1971) found were in those individuals who had attended college sometime after the Second World War. Those who had not gone past a high school education appeared to have the most resistant attitudes. In the area of education, Campbell concluded that a college experience was crucial to modifying past negative white attitudes to a more positive stance. This indicated that not enough emphasis was being placed in the educational institutions before college to lessen prejudice. More effort could and should be made in the grade schools and high schools to bring the races closer together.

In a discussion of the future of racial attitudes, Campbell (1971), stated that the most dramatic shift in attitudes of white Americans has occurred in the period after World War II. Conclusions of the three national surveys by the Institute for Social Research, found that interracial contact was definitely increasing. They also discovered that there has been a greater proportion of

blacks employed in white-collar jobs and there was increased educational achievement among young blacks. The survey team concluded that a college education leads an individual toward more liberal views on racial concerns, the future of white attitudes toward black people cannot be considered without reference to black attitudes toward whites--each influences the other (Campbell, pp. 159-162). "The colleges are pouring out successive cohorts of young people whose racial attitudes are in the large clearly more positive than those of the population into which they are moving" (Campbell, p. 160). They concluded that these attitudes will not revert back to their previous stance, and therefore, these changed views will have a definite effect in changing prevailing American attitudes.

Campbell (1971) felt that the black population will assimilate into the mainstream of American life, as other "minorities have done," but predicted that this assimilation will be a difficult process and will not be achieved in the present decade. "The white population is far from a general acceptance of the principle and practice of racial equality . . . we are at present at a point of uneasy confrontation. American society is developing a new pattern of relationships between white and black and the period of change is a time of tension for both races" (p. 162).

King (1970) noted the need for white society to recognize racism in its midst and understand its presence

before it can move to eradicate it. Blacks are attempting to change it, but are finding much resistance from the white populace. "The white majority, unprepared and unwilling to accept radical structural change, is resisting and producing chaos while complaining that if there were no chaos, orderly change would come" (p. 8). He saw the period from 1955-1965, as a time, although somewhat constructive, that mislead both blacks and whites in this country. "Everyone, activists and social scientists, underestimated the amount of violence and rage Negroes were suppressing and the amount of bigotry the white majority was disguising" (p. 9). King summed up the recent racial disturbances and riots with a quote from Victor Hugo written a century ago: "If a soul is left in darkness, sins will be committed. The guilty one is not he who commits the sin, but he who causes the darkness". "The policy makers of the white society have caused the darkness; they create discrimination; they structured slums; and they perpetuate unemployment, ignorance, and poverty" (p. 9). Although he viewed inner-city crime as wrong, King saw it more as derivative crime; crime derived from racist and suppressionistic policies of the white society. All the laws violated by whites in the areas of welfare, building codes and regulations, police tactics, and education, led to counter crimes by black inner-city residents.

Goldschmid (1970) found that white prejudice toward blacks was much greater than black prejudice toward whites. One particular study, Noel and Pickney (1964, cited in Goldschmid), found black prejudice toward whites significantly less present than white prejudice toward blacks: 41 percent of blacks in the study received the lowest possible prejudice score, compared to only 5 percent of whites; 17 percent of blacks received the highest possible score, compared to 48 percent of the white subjects tested. These results held across all socioeconomic levels. Strickland (1965, cited in Goldschmid), in an analysis of prejudice in college students, found less social distance toward the other racial group, in black students than in white students. Goldschmid cited three additional studies that found similar results (Bogardus, 1958; Bryant, Gardner, and Goldman, 1966; and Webster, 1961). He concluded that "it is clear that black prejudice towards whites, although much more easily justifiable in view of centuries of white oppression of blacks, is much less common than white prejudice toward blacks" (p. 257). A recent survey, however, noted that although white attitudes have become more positive (between 1956-1971), black attitudes have become more negative in a particular midwestern city (Detroit Free Press, 1972). This may indicate a change in racial attitudes; black attitudes may have become more explicit in recent years. Blacks seem more willing now to

express their honest opinion regarding racial attitudes; also, recent changes in American society have made it possible for members of a minority to express their views without fear of reprisals.

A study completed by the United States Commission of Civil Rights (1970) stated the important relationship between the racial composition of schools, and attitudes. Whites attending integrated schools were more interested than whites attending de facto segregated schools in seeing passage of equal opportunity laws, expressed more willingness to reside in an integrated neighborhood, and expressed more willingness to make friends with black people. More legislation could be enacted to increase integration of schools; the early years of school for children are ones in which attitudes can be most greatly affected.

Pettigrew (1964) examined what the concept, 'freedom' means to black Americans. Pettigrew saw freedom as a cessation of adopting the inferior, subordinate role, a casting off of all the remnants of stereotyped inferiority. He saw it as equally important for black people to realize that they have been playing this inferior role, as it was for whites to realize that they have been enforcing this subordinate position on blacks. To see each other as human beings with human needs and desires, both races must break down the façade contained in maintaining role barriers.

In a discussion of what Goldman (1970) referred to as 'revolution,' he noted the positive aspects of overt acting-out behavior. He saw riot behavior as a desperate, last hope attempt to obtain freedom, whereas 'revolution' he viewed as "an act of hope; and a revolution which prefers negotiation to war, which seeks not to destroy but to reform America and which continues in spite of everything to operate on the premise that it is winning is the most transcendently hopeful act of all" (Goldman, p. 203).

J. Boggs (cited in W. G. Smith, 1970, p. 144), very succinctly noted the relationship between human material wealth and human responsibility, and the values that have been placed upon each by Americans:

> Coming in the United States at this time, when there is no longer any problem of material scarcity, the Negro revolt is therefore not just a narrow struggle over material necessities. It does not belong to the period of struggle over goods and for the development of the productive forces, which we can call the era of Dialectical Materialism. Rather, it ushers in the era of Dialectical Humanism, when the burning question is how to create the kind of human responsibility in the distribution of material abundance so that everyone can enjoy and create the values of humanity.

As Schwartz and Disch (1970, p. 4) put it, "the condition of the black man in America reveals that whites consider their pocketbooks to be far more important than their morality."

Blauner (1970) rejected the idea that blacks will or should be assimilated into the mainstream of American

culture. He felt that this is what most whites want to believe; even social scientists hold to the concept of assimilation. Blauner's opinion was that the experience of blacks in America had little in common with the experience of other minority groups. The experiences of a minority group entering the dominant society to a great extent determines how the two cultures will react to one another. For the black man, slavery destroyed their African group identity. Even during this destructive process, blacks began re-building a cultural and ethnic-group identity. Blauner (pp. 112-113) defined black culture as "not just poverty, black ghetto, lower-class," but also "a complex mixture, whose sources include also Africa, slavery, the South, Emancipation and northern migration, and above all, racism . . . Though this culture is overwhelmingly the product of American experience, the first source is still African." It was American racism that Blauner (1970) felt led to the development of a black culture within America. The struggle against this racism provided the basis from which black culture grew and flourished. Blauner's arguments against black assimilation into the mainstream of American life are not totally justifiable. Many minority groups have assimilated into American culture while still maintaining their distinct sub-culture characteristics. There is little reason to assume that blacks could not make a similar transition without losing their

African ethnic-group identity. White acceptance of blacks and black culture would help facilitate this change.

J. H. Clarke (1969, p. 16) poignantly portrayed the dilemma the black man was placed in when he was transposed from his African homeland and thrust into a country totally foreign to his being and life-style.

> The Africans . . . were neither respected Africans nor accepted New World Americans. They were renamed, and became a marginal branch of the human family now referred to as Negroes. The Europeans needed a rationale for their actions and a rationale was created with supporting concepts. The cruelest concept ever devised by the mind of man was created to support the slave trade and the colonial system that followed--the concept of race and the assumption that there are superior and inferior races. The Africans were depicted as people without a history who had never properly handled power and who, certainly had made no contribution to the development of human cultures. And thus, the seeds of the present day conflict were planted.

In a discussion of black self-concept, Proshansky and Newton (1968) stressed the dire effects of slavery and the caste-class system that followed. They saw the consequences of slavery as resulting in a double burden for black Americans: one being the devastating psychological effect and the second being the social and economic inequities. Besides the social and economic impositions of poor and inadequate housing and schools, unemployment and underemployment, inferior jobs, was the less visible but equally serious consequences of low self-esteem, identity conflicts, and feelings of helplessness and hopelessness.

Seward (1956) insisted that blacks must be judged from their own subculture, not from standards set up by the dominant white culture. By viewing black individuals from the dominant culture, deviations are seen that are not deviations when living or considered from the values of the subculture.

The Relationship Between Language and Racial Prejudice

According to Podair (1970) language can have a definite influence on the learning of prejudice. Language can shape ideas and concepts in both conscious communication and unconscious thought. It has contributed to the stereotypes generated against the black individual and the development of racial prejudice (Podair, 1970). The studies by Osgood and by Williams and his associates have shown how important the meanings of words are and how they can give previously neutral concepts negative connotations. Podair (1970, pp. 388-389) stated that concepts such as blackball, blackbook, and blacklist, "cannot be considered accidental and undoubtedly would not exist in a society wherein whites were a minority. Historically, these concepts have evolved as a result of the need of the dominant group to maintain social and economic relationships on the basis of inequality if its hegemony was to survive."

Podair (1970) discussed the connection between the negative affective meanings associated with the word black

as it effects the black child, and how the unfavorable connotations effect as well the white child's perceptions of the meaning of black. These negative meanings are then carried into and through adulthood.

> The term 'black sheep' is utilized in all segments of our society to denote an individual who seems almost completely immobilized in his efforts to effect an adjustment to his environment that could result in fulfilling personal, familiar, and community responsibilities . . . The acceptance of the term 'black sheep', however, assists in the creation of a stereotype of Negro 'irresponsibility' which has become so valuable to the advocates of prejudice (Podair, 1970, p. 398).

Podair (1970) saw the language of a society as reflecting its social values and attitudes. As a society changes, the thinking and speech patterns will also change. Thus, the symbolism behind the concept black and white may change as our society rids itself of prejudice. "Until that time, however, the relationship of language to prejudice towards the Negro will be of import to the social scientist working to meet the challenges arising out of the problems of race relations in present day America" (Podair, 1970, p. 391).

Another view[1] is the argument that the negative connotations of the word 'black' may persist even in a society free of racial prejudice. The negative connotations might be seen in a Manichean sense which describes the forces of darkness and light in opposition.

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[1]Personal communication with Dr. Maryellen McSweeney, College of Education, Michigan State University, Oct. 5, 1972.

Following this line of reasoning, it would be conceivable that a people could be called 'black' without it having negative connotations attached ot it. The color 'black' might still be used for things considered negative, but this does not necessarily have to generalize to the black people.

Citron (1969) discussed what he labelled, "the whiteness of the world of the white child." The white child living in a world of whiteness builds feelings of the "rightness of whiteness" into his personality. Everything associated with white and light colors (i.e., white skin) is perceived as acceptable and good, while dark skin and dark colors are associated with quite the opposite. As the child develops, this feeling of "white is right" becomes what Citron calls "a white-centric world." The norm is white; others of different color are judged by it. This develops into an inferior-superior dichotomy. K. Clarke (1963, cited in Citron, p. 4), noted that ". . . children's attitudes toward Negroes are determined chiefly not by contact with Negroes but by contacts with the prevailing attitudes toward Negroes. It is not the Negro child, that influences children." Citron cited studies by Goodman indicating that white children, early in life, develop an emotional rejection of blacks. One positive note, however, was that a recent study (Triandis, Malpass, and Davidson, 1972) found that black children no longer chose

the white doll, but indicated a preference for the black doll in a laboratory situation; earlier studies by Clark (1947) indicated that black children chose the white doll over one of their own color.

As Williams' (1964, 1966, 1969) studies indicated, white is seen as a symbol of rightness, cleanliness, goodliness, purity and beauty, while black is seen as sin, dirt, and impurity. Historically, white has dominated cultures; the children expressed the same racist notions imbedded within their particular culture (Citron, 1969). Citron noted that the fear and rejection of black becomes established in children long before they have the 'rational' content to support these ideas.

> Centuries of white imperialism over darker peoples, over three hundred years of the institution of slavery in this country, and a quasi-caste system since the days of Reconstruction, have produced concepts and language forms fitting the needs of the dominant group. These forms play their part in forming the habits of thought of children. There has been generated a mythology of racism, with its stereotypes of primitiveness, immorality and dangerousness (Citron, 1969, pp. 13-14).

Citron (1969) felt that one language form used to encourage the racist philosophy was the "contrast-terms," black and white. These objective words are given superordinate, subordinate meaning and emotional affect. This was similar to the general conclusions Williams and his associates had reported (cited in Chapter IV), except that Williams attributed more to the actual negative value of

the color, 'black.' Thus, it can be seen how crucial words and language can be used in the perpetuation of a racist system. As Citron saw it "racism invests skin color with an enormous and completely irrational salience in our country" (p. 14). Although the literature shows how the color 'black' has been given negative connotations throughout history, it appears that prejudice and racism in this country has given black people a negative connotation, not just the color, 'black.'

As Citron (1969, p. 17) concluded:

> It is Whites as a group who enforce the repressions of the racist system and every White, especially those in middle and upper class positions, because they have more political and economic power, should be actively involved in destroying racist arrangements, practices, exclusions, double standards, folkways and institutions, and should be actively involved in building the conditions of equality.

Cognitive, Affective, and Behavioral Aspects of Racial Attitudes

Mann (1959) in a discussion of the relationship among cognitive, affective, and behavioral aspects of race prejudice, stated that few studies have attempted to consider all three of these aspects and whether or not they are related to each other. His study found possible evidence of a relationship among the three, but he stated that the evidence for the relationship was not conclusive. For black college students, he found a positive relationship among the three aspects of racial prejudice. However, for white students no positive relationships were found and a

negative relationship was found between the affective and behavioral aspects of race prejudice.

Insko and Schopler (1967), in a paper on triadic consistency reported the philosophy of the relationship among attitudes, cognitions, and behaviors. According to this theory, there was a tendency for these three aspects to be related. The authors stated that, in operational terms, "there is a probabilistic relation between holding certain beliefs and attitudes and manifesting certain behaviors" (p. 366). Kothandapani (1971) also cited evidence indicating a relationship among these three components of behavior. In a schematic view of attitude, Rosenberg and Hovland (1960), cited affect, cognition, and behavior as the three measurable dependent variables of the intervening variable of attitude.

Jordan's (1971a) work has attempted to show the relationship between cognitive, affective, and behavioral components of attitude and has developed a simplex structural relationship among these aspects in a number of studies involving race and attitude (Frechette, 1970; Jordan, 1971a, 1972; Williams, 1970).

Conclusion

Racial differences are comparatively minor, except for a few physical features. It has been man himself who has blown these differences entirely out of proportion

and hence, created artifically marked distinctions among the races. Through labelling people as different, man began the process that led to what we now refer to as racial prejudice. A race is given a label, the label is then associated with negative connotations, and inferior and superior races are created. The actual labels themselves may mean very little; it is the emotional conceptions underlying them that give them their power. It is not so much the labels that are used, but how they were implemented and what they mean--the attitudes behind the labels.

Perceived voluntariness of choosing a particular racial name is one important variable as to the meaning invested in the term. The ability to create pride in the label is another important feature of racial terminology. Both of these variables are important for the race so named to develop and maintain positive attitudes of self. Once a race has a positive self-concept, it becomes more difficult for other races to devaluate them. Thus, although a racial label may play a small part in the formation of attitudes and prejudice, its presence is indeed felt.

Angeles (1971) in his book on understanding the black experience, perhaps summed up best the dilemma of the racial situation between black and white people in this country, a dilemma he felt should not exist. He introduced his book thusly: "This book is absurd. Its author assumed

that it can help non-blacks begin to realize a love for the black, but this love they should already have, if for no other reason than that we are all alive and struggling for a life of decency and brotherhood" (p. 11).

This is but one area of research concerned with attitudes. Before we can reach any definite conclusions we must arrive at a more refined definition of attitude. The Guttman-Jordan system is an attempt to do this. Their analysis includes not only theoretical notions of attitude, but also a semantic methodological system of measurement accompanying their theoretical conceptions.

CHAPTER IV

RACE, COLOR-LABELLING, AND THE SEMANTIC DIFFERENTIAL

> Black is when they say '. . . one nation indivisible with liberty and justice for all . . .' and you wonder what nation they're talking about (T. Brown, Jr., 1969).

Introduction

The history of word symbolism illustrates how 'black' has been associated with negative connotations, while 'white' has usually been associated with positive characteristics. Osgood (1957) developed the Semantic Differential to measure word meanings. Williams (1964, 1966, 1969) applied this Semantic Differential technique to the study of color symbolism and race. His research has supported the observation that, in American culture, black is generally associated with 'badness' while white symbolizes 'goodness.' Other studies (Jenkins, Russell, & Suci, 1958; Osgood, 1973; Williams, Best, Wood, & Filler, 1971; Williams, Tucker, & Dunham, 1971; Lessing & Zagorin, 1972) concur with this conclusion. Williams and his associates tested these results in the laboratory (Williams & Edwards, 1969) and also cross-culturally (Morland & Williams, 1969; Williams &

Carter, 1967). Two of Williams' recent studies (Williams, Best, Wood, & Filler, 1971; Williams, Tucker, & Dunham, 1971) evaluated the changes occurring in word connotations between the years 1963 and 1969. These studies related some interesting findings that ran contrary to some of Williams' earlier results. Osgood (1973) discussed universal trends in color preferences, connotation, and association. This study supported the notion that blackness and 'badness' are associated, and white and 'goodness' are associated, and that these associations still exist and exist cross-culturally.

Word Symbolism

Racial overtones associated with the words and concepts used for blacks and other non-whites were evident in the language of the very earliest settlers of America. This special language was used first to define lower status for non-whites and later to justify the status that had been assigned to them (Schwartz and Disch, 1970). In an historical anthology and extensive review of the literature on the roots of racism, Schwartz and Disch (p. 6) stated that "before the close of the fifteenth century, the words 'soiled' and 'dirty' first became the linked with word 'black'. By 1536, 'black' connoted 'dark purposes', 'malignant', and 'deadly'; by 1581, 'foul', 'iniquitous'; by 1583, 'baneful', 'disastrous', and 'sinister'." Osgood's (1973) cross-cultural study indicated that black and dark colors universally represent negative perceptions.

Even the Bible contains associations of black and badness, white and goodness. Throughout, similarities can be found linking words such as black, evil, damnation, despair, and sin. The New Testament has similar associations between blackness, darkness, and evil (Schwartz and Disch, 1970). "The impact of biblical color imagery was inevitably reflected in the works of the great English writers from Chaucer to Milton" (Schwartz and Disch, p. 7).

The symbolism involved in the two terms has differentiated black and white, so that these words have become polar opposites. As Fanon (1967) has stated, whiteness has been associated with all things good (i.e., white dove of peace, the bright look of innocence) while blackness and darkness have been associated with quite the opposite (i.e., abysmal depths, the labyrinths of the earth, blacken one's reputation). Fanon continued to state that in all civilized countries, the Negro is the symbol of sin; a white child is looked upon with much admiration and joy, while the black child receives none of this adulation and respect. He did not define what he meant by 'civilized' countries, but it appears he meant 'industrialized' as opposed to 'developing' (or 'pre-industrialized') nations.

R. L. Williams (1972), in a discussion of the changing image of the black American, stated his belief in the importance of terminology in the images that are associated with blacks. By modifying a noun with the adjective

'Negro,' it sets it aside from the dominant group. "The adjective does what it is supposed to do, 'describe and limit.' The prefix 'Negro' establishes a great deal of restrictions on the noun it modifies" (p. 68). Discrimination in the areas of jobs and housing in America supports these conclusions of Williams.

The Semantic Differential Technique

The most extensive studies using the Semantic Differential technique as a measure of semantic meanings was undertaken by the originator of the scale, C. E. Osgood, and his associates at the University of Illinois. J. Williams and his associates, using the Semantic Differential techniques, applied the scale technique to the concepts of race and color.

The rest of this chapter will be devoted to a discussion of the Semantic Differential technique as developed by Osgood (1957) and the applications devised by Williams (1964, 1966, 1969) and subsequently by Lessing and Zagorin (1972).

Osgood, Suci, and Tannenbaum (1957) discussed the methods through which the Semantic Differential technique was devised and the meaning and reasoning underlying it. They saw the concept of 'meaning' as a relational device and have attempted to establish psychological meaning for concepts which are then applied to use in the Semantic

Differential. As they saw it, "the Semantic Differential relates to the functioning of representational processes in language behavior and hence may serve as an index of these processes" (Osgood, Suci, and Tannenbaum, 1957, p. 9). They saw language signs as having certain psychological meanings and with this property can be used in a consistent manner in situations to produce certain behaviors that will then contain social meaning. The consistency of behavior in situations also gives meaning to the processes that are represented semantically.

The Semantic Differential is an attempt to measure a certain type of meaning (attitude) through a small sample of words that vary only along the dimension being measured and are largely insensitive to any other sources of variation. A concept in the semantic space is defined by mediating variables composed of antagonistic pairs and varying along an intensity variable. Each polar word group in the semantic scales is associated with mediating processes, depending largely on the polarity of the terms, and its intensity determined by the seven categories (spaces) in between the two words of the pair. Which of the seven spaces chosen by a particular individual depends upon a mediational process of selection involving an intensity variable:

> Through the functioning of a generalization principle, the concept will elicit checking of that scale position whose dominant mediator component most clearly matches in intensity the corresponding component in the process associated with the concept itself.

> Since the positions checked on the scales constitute the coordinates of the concepts' location in semantic space, we assume that the coordinates in the measurement space are functionally equivalent with the components of the representational mediation process associated with this concept (Osgood, Suci, and Tannenbaum, 1957, p. 30).

No general Semantic Differential scale has been devised; rather, each specific research project using the scale should adopt Semantic Differential words which are both representative and relevant to their particular area of interest. Words should be chosen that take into account individual differences, representativeness, relevancy, and semantic stability (Osgood, Suci, and Tannenbaum, 1957).

Reliability for a Semantic Differential high on the evaluative factor, was established through test-retest correlation data. For one hundred subjects who took forty-item scales, the reliability coefficient was equivalent to .85 (Osgood, Suci, and Tannenbaum, 1957).

Osgood, Suci, and Tannanbaum (1957) stated that since there was "no commonly accepted quantitative criterion of meaning," 'face validity' must be used as the sole measure of validity for the Semantic Differential. Validity studies have been run on the 'evaluation' dimension. Two comparison studies were reported by Osgood, Suci, and Tannenbaum, one comparing it with Thurstone scales, the second with a Guttman-type scale. "The correlation between the Semantic Differential scores and the corresponding Thurstone scores is significantly greater than chance

($p < .01$) in each case, and in no case is the across-techniques correlation significantly lower than the reliability coefficient for the Thurstone test . . . It is apparent, then, that whatever the Thurstone scales measure, the evaluative factor of the Semantic Differential measures just as well" (pp. 193-194).

In comparison with a Guttman scale, the rank order correlation between it and the 'evaluative' factor of a Semantic Differential scale was highly significant ($p < .01$). Osgood, Suci, and Tannenbaum concluded that the Guttman scale and the Semantic Differential scale were, to a considerable degree, measuring the same thing. The semantic factors have been validated through factor analytic procedures. "When the intercorrelations among many scales are factor analyzed and certain basic factors, such as evaluation, potency, and activity, repeatedly appear, we assume that these factors correspond to the major dimensions which people 'naturally' and 'spontaneously' use in making meaningful judgments" (Osgood, Suci, and Tannenbaum, p. 143).

Osgood, Suci, and Tannenbaum (1957) defined attitude as primarily the 'evaluative' component of their Semantic Differential model. They acknowledged that other factors, 'potency' and 'activity' being the most contributive, do add to attitude, but that evaluation is the prime characteristic. Attitude was defined by Osgood, Suci, and Tannenbaum (1957, p. 190) as "a learned implicit process which is

potentially bipolar, varies in its intensity, and mediates evaluative behavior." It was viewed as an internal mediational (or guiding) activity working between stimulus-response behavior. This model posits attitude as part of the semantic structure of an individual. Factor analysis is the method of choice to ferret out from meaning, the component that is attitude.

In their research using factor analysis, Osgood, Suci, and Tannenbaum (1957) have identified the evaluation component; it has usually been found to be the dominant factor. "It seems reasonable to identify attitude, as it is ordinarily conceived in both lay and scientific language, with the evaluative dimension of the total semantic space, as this is isolated in the factorization of meaningful judgments" (p. 190).

Osgood, Suci, and Tannenbaum (1957) stated that they were measuring attitude, which they defined as primarily the 'evaluative' component of the Semantic Differential. It is probable that they indeed were measuring a part of attitude, but attitude is a very complex variable composed of many facets, and it is unlikely that their measure takes into account all of attitude. Their scale consists mainly of cognitive items, and does not attempt to measure any of the action (conative) component of attitude.

> In terms of the operations of measurement with the semantic differential, we have defined the meaning of a concept as its allocation to a point in the

> multidimensional semantic space. We then define attitude toward a concept as the projection of this point onto the evaluative dimension of that space. Obviously every point in semantic space has an evaluative component (even though the component may be of zero magnitude, when the evaluative judgments are neutral), and, therefore, every concept must involve an attitudinal component as part of its total meaning (Osgood, Suci, and Tannenbaum, 1957, pp. 190-191).

Osgood indexed attitude by using concepts that have been shown to be high in evaluation. Test-retest reliability data from various studies using this method has ranged from between .87-.93; the methods have displayed considerable face validity. Jenkins, Russell, and Suci (1958) conducted a normative study of the Semantic Differential in which 360 words were rated on 20 scales by 18 groups of 30 subjects. Test-retest reliability for this study was .97. Studies that have used both Thurstone and Guttman scales lend evidence to the notion that the evaluative dimension of Osgood's Semantic Differential is a measure of attitude. Osgood believed that the evaluation factor of the Semantic Differential can be used as a generalized attitude scale (Osgood, Suci, and Tannenbaum, 1957). Since their test measures primarily the cognitive component, it is questionable whether it can be considered a general measure of attitude. Osgood, Suci, and Tannenbaum have no methodological or statistical system to support their theoretical system; Guttman (1959) felt that to develop a sound theory, it must have a sound structural basis, as well as a semantic definitional system.

To improve prediction of attitude, other dimensional scales may be added to the evaluation dimension. "The relative weights of these factors have been fairly consistent: evaluation accounting for approximately double the amount of variance due to either potency or activity, these two in turn being approximately double the weight of any subsequent factors" (Osgood, Suci, and Tannenbaum, 1957, p. 325). Osgood stated that two individuals may have the same attitude toward a certain concept (i.e., Negroes; abortion reform) as measured by the evaluation factor, but the concept may have quite different meanings to each individual rating it. Tannenbaum ran a study where one individual rated the concept, THE NEGRO, as unfavorable, strong, and active, whereas another rated this concept equally unfavorable, but also as weak and passive. No behavioral data were available, but Tannenbaum felt that these two individuals would behave quite differently if put in similar situations. "While it is true that different attitudes imply different behaviors toward the objects specified, at least in some contexts, it is not true that the same attitude automatically implies the same behaviors" (p. 190). The greatest criticism of this conception, was that no systematically measured behavioral data were used. Clinical observation alone is a weak basis for a theory of attitude.

Fishbein (1965) saw Osgood as presenting attitude as a unidimensional concept. Although Osgood stated that the

definition of attitude included more than merely the evaluation factor, Fishbein (p. 108) felt that Osgood's definition involved only the "evaluative meaning of an object or a concept--its 'favorableness' or 'unfavorableness', its 'goodness' or 'badness'."

"Fishbein and Raven (1962, cited in Fishbein, 1965, p. 109) suggested a definition of belief that is analogous to Osgood's (1957) definition of attitude". Of the six types of beliefs (on the following page), in Fishbein and Raven's definition, the first four involved the cognitive component or structure while five and six were concerned with an individual's behavioral intentions or the action component of belief. Although not stated by these authors, it appears that the affective component would be involved in Levels 4 and 5 of the Guttman-Jordan system. Their definition would then include the cognitive-affective-conative trichotomy; since they see their definition as analogous to Osgood's definition of attitude, this would lend support to the belief that Osgood's definition included these three elements.

> These six types of beliefs have been classified as follows:
>
> 1. Beliefs about the component parts of the object;
> 2. Beliefs about the characteristics, qualities, or attributes of the object;
> 3. Beliefs about the object's relations with other objects or concepts;
> 4. Beliefs about whether the object will lead to or block the attainment of various goals or 'valued states';

5. Beliefs about what should be done with respect to the object;
6. Beliefs about what the object should, or should not, be allowed to do (Fishbein, 1965, pp. 110-111).

Osgood (1965) ran cross-cultural comparisons on a semantic differential scale using concepts high on evaluative loadings, indicative of Osgood's definition of attitude. Intercorrelations were performed in seven countries involving one hundred common concepts. On three dominant factors of evaluation, potency, and activity, Osgood found that they existed across all cultures that he studied. He concluded that these factors represent common semantic dimensions, and are not related to specific cultures. There exists a common meaning system, panculturally; individuals use similar symbolic dimensions in organization of their thoughts and their experiences. Osgood pointed out that this is one aspect of language that has been found to be universal. Therefore, this method can be used to measure 'subjective culture'--meanings, attitudes, values, customs--across different cultures and languages (Triandis, 1972).

Brinton (1969) used Guttman scale analysis in deriving an attitude scale from Semantic Differential data. He found this method useful "in testing dimensionality of the selected adjectives and in ordering individuals on the dimension" (p. 473).

Color Labelling and the Semantic Differential

Williams and his associates have been conducting studies using the Semantic Differential and applying it to the concepts of race and color. In one of his earliest studies, Williams (1964) confronted the question of whether the words, 'black' and 'white,' could carry a meaning that would encourage or maintain the learning of race prejudice. He cited evidence indicating the negative use that the word or color, 'black,' has in our society; in each example, black was associated with something unpleasant and had a connotation of badness. Some of these symbolic meanings that Williams (1964, p. 721) cited include: "things look black, to blacken one's reputation, blackmail, black list, blackball, black sheep". Religion and the supernatural contain much of the same: devils and sin as black, angels and heaven as white. In all types of literature from children's stories to the mass media the same type of black-white symbolism is found. Researchers have devoted little time or effort to this black-white word dichotomy. "The observations lend support to the generalization that, in our culture, black symbolizes badness and white symbolizes goodness" (Williams, 1964, p. 722). Jenkins, Russell, and Suci (1958) found that 'white' and 'light' were given a positive rating, while 'dark' was evaluated negatively. Other studies (Fanon, 1967; Podair, 1970; Triandis 1972) supported Williams' conclusions.

In one study, Williams (1964) found a high degree of consistency in evaluation of color names. "Color names were shown to be quite similar across both geographical and racial lines providing strong support for the notion that the connotations of colors are learned via experiences common to most persons in our general culture" (p. 728). Both white and black persons evaluated the color name white more positively than they evaluated the color name black. Black and white were given quite different ratings on the three factors of 'evaluation' (E), 'potency' (P), and 'activity' (A). On both potency and activity, significant differences were found. The color name black was given a rating of 'strong' by both black and white subjects; white was rated as 'weak.' These subjects also rated black as somewhat 'passive' and white as somewhat 'active.' These results were somewhat different than past results. Usually, P and A were slightly positively correlated with E; here, the results of P and A correlated in opposite directions (Williams, 1964).

Of the ten color names tested, black received the most negative rating on the evaluation dimension. Williams (1964) cited a study by Staats and Staats (1958) that stated that evaluative meanings can be conditioned and modified by regular association with other words having a positive or a negative connotation. A laboratory study by Williams and Edwards (1969) illustrated successful conditioning to the words 'black' and 'white.'

> From this, one predicts that the regular association of the term Negro with the term black, and the association of Caucasian and white, would tend to condition the connotation of 'badness' to the former and 'goodness' to the latter. Such an effect could be a significant background factor in Caucasian prejudice against the Negro, serving to facilitate the original learning of prejudice in childhood and to support prejudice among adults (Williams, 1964, p. 730).

The principal conditioning probably occurs in the above model; however, once prejudice has been established, some conditioning may occur in the opposite direction. A 'vicious circle' of mutual reinforcement may then be set up. This cause-effect relationship is still unclear and additional studies are needed (Williams, 1964). The importance of this study lies in the discovery that once prejudice is learned, small reinforcements can lead to maintenance of the original prejudice. There is ample opportunity in our society to maintain this 'vicious cycle' of prejudice once learned in early childhood.

In another study, Williams and Carter (1967) found further support for the idea that designation of a group by a color name influences perception of that group by others. "Triads of concepts linked by the color code (e.g., Black-Black person-Negro) were significantly more similar in connotative meaning than were triads of concepts not so linked (e.g., Black-Red person-Oriental)" (p. 19). This study was repeated in Germany to discover if the findings were specific to American culture or whether they had

greater generality within Western culture. Similar results were found in the German sample.

Williams and Roberson (1967) found that the development of racial attitude and color meanings occur at about the same time, with development of racial attitude occurring slightly sooner. "This result does not support the earlier hypothesis (Renninger and Williams, 1966) that the black-white color meanings are learned first, and provide a frame of reference for the learning of evaluative responses to racial groups designated as 'black' and 'white'" (p. 687). Williams and Roberson concluded that the color-meaning factor acts more as a reinforcing element in the development of prejudice in childhood.

Another cross-cultural study using the Semantic Differential examined attitudes of five different groupings of people in four societies. Morland and Williams (1969), using the Semantic Differential developed by Williams in 1964, tested college students representing the following groupings: American Caucasian and American Negro, Asiatic Indian, German Caucasian, and Hong Kong Chinese. For the American samples, white attitudes for this new study proved similar to white attitudes tested in 1964. The attitudes of blacks did change. Both words 'Caucasian' and 'American' were given less favorable ratings in the latest study; 'American' was given a rating much closer to the concept of 'Caucasian' than to the concept 'Negro.' These blacks rated

'African' more positively than the comparable sample of blacks tested in 1964, and rated 'Negro' higher than 'Friend' in the more recent study. Morland and Williams (1969) concluded "that these indications of changes in attitudes reflect the feelings growing out of a heightened sense of racial identity among Negro Americans." The authors noted that a limitation of their study was that "the evaluative factor of the Semantic Differential measures the direction of the attitude rather than its content" (p. 110).

Williams and Edwards (1969) discussed a laboratory study involving preschool children and the modification of color and racial concept attitudes. They attempted to modify attitudes through laboratory reinforcement conditioning procedures. The results of the study indicated that the negative associations of black can be reduced, the positive association of good with white can be weakened, while not creating a reversal of the associations with these colors. The possibilities for use and application of this principle on a larger scale merits further investigation.

> The study can be viewed as providing evidence in support of the hypothesis concerning a functional link between the black-white concept attitude and the racial concept attitude; children whose black-white concept attitude had been weakened subsequently showed somewhat less tendency to evaluate Negroes negatively and Caucasians positively. The change in racial attitude attributable to the experimental treatment, however, was not great (Williams and Edwards, 1969, p. 748).

Williams (1970) tested the relationship of color-coding practice to the perception of racial groups. Traditional color-coding practice associated Caucasians with the color white, Negroes with the term black, Orientals with yellow, American Indians with red, and Southwest Asians with the color brown. "Color coding might operate as a background factor in the development and/or maintenance of attitudes toward racial groups" (p. 38). Each of the ten color names studied by Williams (1964) was paired with the word 'person' (black person, white person, brown person, yellow person, red person, blue person, green person, purple person, orange person, and grey person) and evaluated on the three dimensions, evaluation (six concepts), potency (three concepts), and activity (three concepts). Results for Caucasian subjects indicated that racial concepts do have connotative meanings similar to their color names. The most consistent findings were for the evaluation factor; less consistent results were found for potency and activity. Williams stated that this is important since Osgood, Suci, and Tannenbaum (1957, p. 193) pointed out that "score variation along the E dimension covaries closely with the score variation on conventional attitude tests." Caucasian subjects rated Caucasians most favorably, Asiatic Indians and Negroes least favorably. This compared with their evaluative ratings of color names. Williams concluded that "while the direction of cause and effect cannot be

demonstrated here, these data are consistent with the notion that the evaluative connotations of color names applied to racial groups are one determinant of the favorability of attitudes toward the racial groups" (p. 47). Williams (1969, pp. 384-385) "found that subjects who viewed the color name Black more positively had somewhat more favorable attitudes toward Negro persons, while subjects who viewed Black more negatively had somewhat more negative attitudes."

A suggestion by Williams (1970) to remove the possible detrimental effects of this color code-racial concept association would be to eliminate the reference to racial groups by color names. This, he felt, would eliminate one crucial channel that has been reinforcing negative connotations. The variable of voluntariness must be considered. Positive factors derived by blacks being able to choose their own 'label' (whichever they may desire), may account for greater gain than any negative loss through association with negative concepts.

Renninger and Williams (1970) found similar results in their study of preschool children. At a very early age, children learn the associations of the word black with negative concepts and white with positive conceptions. This can easily generalize to persons or groups of persons labelled black, brown, white, etc.; hence, the learning of the language and affect of prejudice. These authors found similar results for both black and white children. "As

James Baldwin has written (1962, p. 65, cited in Renninger and Williams, 1970, p. 320),"Negroes . . . are taught to despise themselves from the minute they open their eyes on the world. This world is white and they are black." One task of social scientists can be the association of black with things positive; blacks have begun to do this with the "black is beautiful" movement, but whites have done little to help this cause.

Another study conducted by Williams and McMurtry (1970), supported the previous work of Renninger and Williams (1966) and Williams and Roberson (1967). They found much similarity between seventh grade students' responses on what they perceived in the affective meanings of color names and what college students affectively perceived in the color names. They concluded that this affective perception is operative as early as age thirteen and probably considerably earlier than this age. "Thus, the evaluative meanings of white and black appear to develop quite early in life and hence are available to influence the formation of attitudes toward groups of persons designated, quite inaccurately, as 'white' and 'black'" (Williams and McMurtry, 1970, p. 713).

A cross-cultural study conducted by Williams, Morland, and Underwood (1970) in the United States, Europe, and Asia supported their contention that connotations of color names were not only evident in the United States, but

were also present in different cultures. They stressed that for American culture, the move to substitute the word 'black' for 'Negro' may not be so wise. The negative associations with the word black may then be conditioned to the group of persons referred to as black. They felt that the word Negro does not have these negative color name meanings, until it becomes associated with the term black early in a child's life. However, it would appear that just as the child learns the negative connotations associated with the word 'black,' he would as easily learn the negative associations of the word 'Negro' in this society.

Williams, Tucker, and Dunham (1971), in a review of changes in the connotations of color names among Negroes and Caucasians, noted that most studies indicated that both Caucasians and Negro students rated the color name white as good, weak, and active, and the color name black as relatively bad, strong, and passive. During the mid- and late 1960's, there was a heightened acceptance of the term 'black' by black Americans; it became a rallying point of identification. This was one of the reasons Williams, Tucker, and Dunham replicated the 1963 study in 1969. For black subjects, the concept 'black' became more positive (evaluation of good) and more active; the conception of strength remained about the same as it had been in 1963. The term 'white' was rated by black subjects as less positive and less active; the rating of weakness remained the same. The

authors cited the black identity movement as a major cause of this change. For white subjects, no changes occurred for either the term 'black' or the term 'white.' Three other color names were included in both studies, but no changes were evident for either black or white students.

> The events of the years 1963-1969, including the development of the black identity movement, appear not to have altered the general Caucasian view of black as being bad, strong, and passive, and white as being good, weak, and active . . . Thus, it would appear that as of 1969, the impact of the black identity movement had no appreciable effect upon the meanings of color names to Caucasian persons (Williams, Tucker, and Dunham, 1971, p. 228).

Another study conducted by Williams, Best, Wood, and Filler (1971), tested whether the color 'black' had gone through any changes due to the black power movement, despite lack of changes in the concept, 'black person,' for Caucasians. This study found no significant changes for any of the color names or ethnic concepts for Caucasian college students during the 1963-1969 time period. There was some significant changes in the ratings of the color-person concepts--the affective meanings of color-person concepts became more closely associated with their ethnic concept. For example, the color-concept, 'black person,' was more nearly associated with the 'ethnic' concept, 'Negro,' in this 1970 study than it was for the 1963 study. Williams, Best, Wood, and Filler concluded that the color person meanings were coming closer to the ethnic concept meanings. Meanings attributed to the ethnic concepts themselves (i.e., Caucasian, Negro), however, had not been

changing. The authors' noted that the black power movement has probably resulted in an increased acceptance by whites of usage of the terms black for black people and white for white people. This, they pointed out, was purely a change in rhetoric, without any meaning changes in the ethnic concepts, Caucasian and Negro, during the time period from 1963 to 1970.

Lessing and Zagorin (1972, p. 62) used a form of the Semantic Differential "as an exploratory investigation of the extent to which the cognitive and emotional restructuring advocated by black power advocates was actually being accomplished." Two hundred seventy-two white and one hundred seventy-six black college students in five separate colleges and universities were tested. Lessing and Zagorin used a measure of the degree to which students had a high or low degree of "black power orientation" and a Semantic Differential measure of attitude toward the following concepts: 'friend,' 'enemy,' 'ideal person,' 'colored person,' 'black person,' 'white person,' and 'Negro person.' Among their eleven hypotheses tested was the assertion that students high on the measure of "black power orientation" would score high on the 'evaluation' dimension for the concept 'black person' on the Semantic Differential and receive a lower score on the E of the Semantic Differential for 'black person' than for 'Negro person' or 'colored person.'

The measure of "black power ideology" used in this study was a twenty-three item Black Power Ideology Scale, developed by Lessing. One of Osgood, Suci, and Tannenbaum's (1957) Semantic Differential techniques was used as a measure of attitude toward various racial groups. Their particular choice of concepts was based on studies of Williams (1966) and Williams and Carter (1967). The concepts rated were as follows: 'friend,' 'enemy,' 'ideal person,' 'black person,' 'white person,' 'colored person,' and 'Negro person.' Each concept was rated on twenty scales, ten representing the 'evaluation' dimension, five representing 'potency,' and five representing 'activity' (p. 62).

One major purpose of this study was to answer the following question:

> If one compares high and low scorers on a measure of black power ideology focussed mainly upon its political and economical aspects, is there independent evidence that the high pro-black-power scorers express less depreciation of blacks and less idealization of whites than the low black power scorers? (Lessing and Zagorin, 1972, p. 69).

The results of the study confirmed that for both black and white students, those high in black power orientation gave 'white person' a lower 'evaluation' rating.

Williams (1966) wrote that the connotative associations with the word 'black' were negative and will probably remain so; Lessing and Zagorin (1972) felt there have been positive changes made by youthful black power advocates; their results indicated that one major effect of the black

power movement "was the removal of the odious connotations of black without giving it clear and unequivocal priority over other non-white ethnic designations" (p. 69). In Williams' 1966 study he found that both white and black students gave the concept 'black person' a much lower 'evaluation' than 'Negro person.' In Lessing and Zagorin's (1972) study, those low in black power ideology likewise evaluated black person lower, but not significantly so, than Negro person. Those high in black power ideology did not show a significant reversal of these results. Williams, Best, Wood, and Filler (1971) found that in 1970, whites perceived the concepts 'black person' and 'Negro' as more closely associated than they had in 1963.

Although there were no clear or significant results for the 'evaluation' factor, there were for the 'potency' and 'activity' factors. "Blacks were seen as the strongest, most potent, and most active. Negroes were viewed as slightly less strong and active, whites as still less strong and active, with colored persons being viewed as the weakest and most passive" (Lessing and Zagorin, 1972, p. 70).

> Though the word 'Negro' was once held to have the same meaning of 'slave' by a pre-Civil War court (Isaacs, 1963, p. 65), the contention of Baird (cited in Bennett, 1967, p. 52) that 'Negro' evokes a slave image in the minds of twentieth century Americans is questionable on the basis of the present findings: Negro person was perceived as no weaker than white person. Clearly, however, the designation 'black person' was the most evocative of the powerful image which black power advocates desire for Afro-Americans (Lessing and Zagorin, 1972, p. 70).

Lessing and Zagorin (1972, p. 72) concluded that their "research suggests that acceptance or rejection of black power ideology has verbal attitudinal correlates."

Osgood (1973) has provided an extensive evaluation of color preferences and connotations across cultural boundaries. He had found that BLACK was the most 'disapproved' (taboo) color, being so in 33 of 57 countries evaluated; WHITE was the least disapproved, disapproved in only six of 57 countries. With respect to the potency (P) factor, in an Asian community, WHITE was considered light (individual's responses of 8 out of a possible 10), while BLACK was rated heavy (1 out of a possible response of 10 on a potency scale). Another study evaluating 17 countries, found bright colors consistently selected and preferred over dark colors. In a German sample, it was found that "brightness correlated positively with a 'happiness' cluster (presumably E+), negatively with 'forcefulness' (P+) and negatively with 'calmness' (P+ and A-?)" (p. 47). Other studies reported preferences of WHITE first, BLACK second, and GREY last; studies in Western European and East Asian communities reported WHITE rated as good and both GREY and BLACK rated as bad.

> For American English speakers, both BLACK and WHITE have uniqueness of affect attribution and we suspect that despite the parenthetical addition of (COLOR) they carried racial undertones. In the low P but high A of BLACK, the high CI (Conflict Index, a measure similar to the E, P, and A measures) of WHITE, and the fact that WHITE has less A than

> BLACK (all in contrast to universal trends), one can perhaps see the impacts of the Civil Rights Movement, of the Black Panthers and of the rally cry of 'Black Power' upon our dominantly white Midwestern small-city teenagers; Williams et. al. (1970) confirms the unusually high A of BLACK for their Caucasian AE White subjects (this sample was American college students), but not the low P that we find. The high P and FAM (familiarity) of COLOR seems consistent with heavy exposure to advertising in the mass media and with near-saturation of color-T.V. (Osgood, in process, p. 70).

In a discussion of universal trends in color preference, connotation, and association, Osgood (1973) stated that the only universal for WHITE was that it was low on the Potency dimension. BLACK and GREY were both low in Evaluation and Activity, but differed substantially on Potency. On Potency, BLACK was nearly P+ and GREY was clearly P-; BLACK was high in CI and GREY was low in Familiarity.

Osgood (1973, p. 96) discussed color connotations; he defined 'connotations' as "operationally-adjectival characterizations (e.g., adventurous, solemn, cowardly) and emotion-related nominal characterizations which can be readily transformed into adjective (e.g., valor, female, passion, anxiety, disgust)." He divided color associations into four categories: (A) Concrete Identifications, (B) Concrete Associations, (C) Abstract Association, and (D) Abstract Symbolisms. The research on the four categories was done cross-culturally in 37 different regions. This recent cross-cultural study clearly illustrated that the

'color' white was universally associated with positive concepts and black almost always connoted the negative. Grey, which is often associated with black, also is viewed negatively. The Concrete Associations category is the most realistic of all the categories; the color is the association (i.e., white doctor's uniform). The next two categories, Abstract Association and Abstract Symbolisms, are much less reality-based. It can be seen that most of the examples under Abstract Association have little to do with actual color representations (i.e., white representing eternity, virtue, innocence, life; grey and black connoting discouragement, fatigue, sin, falsehood, Satan). Some of the connotations (one-sixth of those listed by Osgood) of white do represent negative meaning (mourning, sin, and death); however, all the concepts listed under Abstract Association for the 'colors' grey and black were negative. Osgood (1973) studied 37 different cultural regions; in only three of these regions was the 'color' white given a negative 'evaluative' rating. Likewise, for grey and black, the majority of the regions studied (34 out of 37) gave grey a negative 'evaluation,' along with a stronger 'potency' rating (i.e., word associations such as sin, death, and murder). The following analysis of these three 'colors' for the three categories was taken from Table 6:19 (Osgood, 1973):

B: Concrete Associations

WHITE: baby, child, daughter, doctor (uniform), flowers . . .
BLACK: dirt, mud, winter . . .

C: Abstract Associations

WHITE: eternity, the future, virtue, innocence, holiness, chastity, modesty, virginity, purity, integrity, life, mourning, sin, death, truth, heaven, light, marriage
GREY: mourning, discouragement, pessimism, negation, fatigue, boredom
BLACK: sin, mourning, humility, death, murder, falsehood, negation, Satan, devils, hell

D. Abstract Symbolisms

WHITE: Brahman (highest) caste, flag of truce
BLACK: Siva(India), Sudras (lowest) caste (India)

(1) Concrete color identification--names of things naturally (or normally) having a given color (e.g., WHITE--chalk, BLACK--night)
(2) Concrete color associations--names of things culturally associated with a given color (e.g., BLACK--necktie, RED--sacrifice)
(3) Abstract color associations--terms for non-"point-at-ables" which can only have color metaphorically (e.g.,GREY--Monday, BLUE--eternity, RED--patriotism)
(4) Abstract color symbolisms--culturally significant concepts which certain colors "stand for" or represent traditionally but not in any obvious way metaphorically (e.g., colors associated with castes in India, with certain deities, religions, etc.)

The vast majority of associations reported in the literature were readily codable as abstract associations--that is, concepts which have no color literally and hence whose associations with color must be based upon a metaphorical relation, e.g., virtue, innocence and chastity have no inherent color and their frequent association with WHITE suggests a common affective mediation. In this sense, we can say that such metaphorically-based associations are also non-arbitrary.

> With three exceptions (3 cultural communities), WHITE has E+ associations--virtue, purity, truth, heaven, and the like; GREY has consistently E- (as well as P- and A-) associations--pessimism, fatigue, boredom, for example; BLACK is equally E-, but obviously higher P--sin, death, murder, for example, to say nothing of Satan . . .

Conclusion

Throughout history, 'black' has been associated with negative words, while 'white' has been associated with positive conceptions. Many studies (Bennett, 1967; Jenkins, Russell, and Suci, 1958; Lessing and Zagorin, 1972; Osgood, 1973; Podair, 1970; Schwartz and Disch, 1970; Williams, 1964, 1966, 1969) support this belief.

The Semantic Differential technique was developed by Osgood (1957) and his associates to measure semantic meanings of words and concepts. Much of their research involves an attempt to define attitude, which they see as primarily a combination of three components, 'evaluation,' 'potency,' and 'activity.' Of these three, 'evaluation' is seen as representing the primary component of attitude. Osgood (1965) has found that the three concepts, 'evaluation,' 'potency,' and 'activity,' appear cross-culturally; he felt that this was evidence supporting the concept that a common meaning system exists across cultures; individuals use similar symbolic dimensions in the organization of their thoughts and their experience.

Williams (1964, 1966) and his associates have applied the Semantic Differential technique to race and

color. Their research concluded that 'black' has been symbolically associated with negative concepts, and 'white' with quite the opposite. Extensive studies have been conducted by Williams and his associates between the years of 1964 and 1971 (Williams, 1964, 1966, 1969, 1970; Williams, Best, Wood, and Filler, 1971; Williams and Carter, 1967; Williams and Edwards, 1969; Williams, Morland, and Underwood, 1970; Williams and McMurtry, 1970; Williams and Roberson, 1967; Williams, Tucker, and Dunham, 1971; Morland and Williams, 1969; Renninger and Williams, 1970) to support these conclusions; additional studies have been conducted using and/or citing the work of Williams (Lessing and Zagorin, 1972; Osgood, 1973; Triandis, 1972). Jenkins, Russell, and Suci (1958) found that 'white' and 'light' were given a positive rating, while 'dark' was evaluated negatively.

Williams and Edwards (1969), in a laboratory experiment, found that the negative associations of black can be reduced, the positive associations of white can be weakened, without creating a reversal of the associations with these colors. Their subjects showed less tendency to evaluate Negro negatively and Caucasian positively. The authors found a functional link between the colors, black and white, and the racial names, Negro and Caucasian.

Williams (1970) has suggested that since he found an association between color-coding and racial concepts (i.e.,

the negative connotations of black become associated with the racial group 'black'), it would be beneficial to eliminate the reference to racial groups by color names. The present racial ABS study, however, found no differences between the words, 'black' and 'Negro', among a group of college students. This would indicate that Williams' above suggestion might have been premature.

The results of these studies indicated that although there once was a distinction between the concepts black (black person) and Negro (Negro person), this distinction probably has begun to dissipate. Williams' earlier studies (1964, 1966) found a distinction; two of his latest published studies (Williams, Best, Wood, and Filler, 1971; Williams, Tucker and Dunham, 1971) indicate lack of a difference. Williams, Best, Wood, and Filler (1971) found that color person meanings are coming closer to ethnic concept meanings, i.e., 'black person' was more nearly associated with 'Negro' in a 1970 study than was found in 1963. They pointed out that the recent black power movement has probably resulted in increased acceptance by whites of the term 'black' for black people. This conclusion was supported by the present ABS study and also by Lessing and Zagorin's (1972) study. Although they found some slight differences, they concluded that 'Negro' no longer has the negative connotations it might have had sometime in the past.

CHAPTER V

METHODOLOGY

> To satisfy our doubts, . . . therefore, it is necessary that a method should be found by which our beliefs may be determined by nothing human, but by some external permanency--by something upon which our thinking has no effect . . . The method must be such that the ultimate conclusion of every man shall be the same. Such is the method of science. Its fundamental hypothesis . . . is this: There are real things, whose characters are entirely independent of our opinions about them . . . (Buchler, cited in Kerlinger, 1964, p. 7).

The methodology for this thesis is based on Jordan's extensive research at Michigan State University. Jordan has expanded and refined Louis Guttman's four-Level facet theory into a six-Level design, maintaining the simplex structure.

Jordan (1971b) applied his new five-facet, six-Level research design to the mentally retarded in seven nations. In reviewing the literature in the area of attitudes toward mentally retarded persons, Jordan (1970) found no studies that had employed a Guttman facet design (p. 3). Thus, attitude research in this area using a facetized design is a relatively new and recent innovation.

Out of this extensive research on attitudes toward the mentally retarded, Jordan developed the Attitude Behavior

Scale toward mentally retarded persons (ABS-MR). Further research and investigation lead to modification of the scale, and also to the development of parallel scales for groups other than the retarded. The need for more concise and systematic measurement of attitudes is cited by Jordan (1971a):

> Extensive reviews (Bray, 1970; Campbell and Schuman, 1969; Dell Orto, 1970; Erb, 1969; Frechette, 1970; Harrelson, 1970; Morin, 1969; Poulos, 1970; Robinson and Shaver, 1969; Robinson, Rusk and Head, 1968; Vurdelja, 1970; Williams, 1970) of the studies of attitudes toward such diverse attitude objects, as mental retardation, deafness, blindness, mental illness, war, religion, nationality, perceived racial differences, indicated that none of the previous studies employed an attitude scale constructed on the basis of the structural theory proposed by Guttman in 1959. It is unclear what attitudinal levels or sub-universes were being measured in most, if not all, of these studies; although a semantic analysis indicates that most of the scales fall at the stereotypic level in Guttman's paradigm. If the latter statement is correct, it may explain the recurring theme throughout attitude research that "attitudes do not predict behavior" (p. 8).

These attitude-behavior scales have not only been applied to numerous 'minority' groups, but have been translated into different languages and used cross-culturally. Prior to Jordan's research, attitude scales had not been used extensively across different cultures and none were found in disability. A review of the literature in 1965 failed to indicate even one study "which attempted to relate findings cross-culturally or cross-nationally . . . Only three studies (Laing and Chazan, 1966; Schonnell and Watts, 1956; Schonnell and Rorke, 1959) were found in the

American literature which were conducted in countries other than the United States" (Jordan, 1970, p. 4).

For rigorous methodology to be useful, it must be based on theory that is relevant to the real world. Jordan's theoretical methodology and five-facet, six-Level attitude scale relates closely to McGuire's (1969) cognitive-affective-conative (knowing, feeling, acting) analysis of the human condition. Jordan's first two Levels (Table 17, Levels 1 and 2), specifically involve the cognitive component of behavior. This parallels McGuire's formulation of the cognitive aspect of attitudes (also called by McGuire 'perceptual, informational, or stereotypic component') in which he states "how the attitude object is perceived, its conceptual connotation--it is the 'stereotype' the person has of the attitude object" (p. 155). This is the Level that Jordan feels most attitude studies have dealt with, these studies neglecting almost entirely the affective and conative areas. The third Level in Jordan's attitude 'hierarchy,' involves the affective component of attitudes. According to McGuire, this component of attitude (also called the 'feeling or the emotional component') deals with the person's feelings of liking or disliking about the object of the attitude (p. 155). Levels 3 and 4 on the ABS involve a combination of the affective and conative components, Level 5 deals with the affective component, while Level 6 is concerned strictly with measures of conative behavior.

McGuire states that "the conative ('action, behavioral') component of attitude refers to the person's gross behavioral tendencies regarding the object" (p. 156).

In developing the Attitude Behavior Scale, Jordan has modified the structural theory of Guttman by including philosophical and theoretical explanations of human behavior. With these theoretical and methodological tools, Jordan has developed and expanded the range of attitudinal research. Because of the ABS instrument, it has been possible to analyze the facets of attitude and thus provide a more rigorous, methodological framework for attitude research.

Review of Attitude Scales

Bogardus (1925) was one of the early researchers to develop attitude scales. His 'social distance scales' attempted to measure the amounts, degree, and feelings associated with social contact that whites perceived themselves as having with blacks. Taylor (1971) states that this type of scale is rarely used today because many researchers feel it does not give a true measure of racial attitudes. Scales of this nature have been used by Maustuscelli (1950) and Proenza and Strickland (1965).

Thurstone's (1931) attitude instruments used a method whereby judges evaluated the items to be selected. His racial scales contained almost exclusively stereotypic items (Frechette, 1970). This method has been criticized

for the process used in selecting the item continuum, the 'objectivity' of judges, and the time and effort required for constructing and scoring of the scales (Hovland and Sherif, 1952; Jahoda and Warren, 1966; Frechette, 1970). Variations of the Thurstone scale were developed by Hinckley (1932) and Rosander (1937).

Other early scales designed to measure attitudes were developed by Likert and Murphy (1938). They designed three scales to measure controversial issues of that time, an 'Internationalism Scale,' an 'Imperialism Scale,' and a 'Negro Scale.' These three measures of attitude were found to be highly correlated with each other and appeared to discriminate between 'racists,' 'moderates,' and 'liberals' on the 'race question' of that time period (Taylor, 1971).

The method of intuition was used by Likert (1932) to select items for use in an instrument. An item was selected if it was judged to be 'favorable' or 'unfavorable;' items not in one of these two categories were thrown out. Likert developed a scale to assess attitudes toward blacks. Although most items were of a stereotypic nature, some items could be considered at the hypothetical action level (Frechette, 1970). Several social scientists (Steckler, 1957; Greenberg, 1961; and Campbell and Schuman, 1968) used modifications of Likert's technique. "Likert's instrument has been criticized for yielding only ordinal scale data and items selected by intuition" (Taylor, 1971, p. 15).

Another disadvantage of this technique is that often the total score of an individual has little clear meaning, since many patterns of response to the various items may produce the same score (Warren and Jahoda, 1966).

Guttman developed unidimensional scalogram analysis; he modified his techniques of attitude measurement with his introduction of two new approaches, facet design and nonmetric analysis. Guttman-type scales have been developed to study racial attitudes by Harding and Hogrefe (1952), Kogan and Downey (1956), Triandis, Levin and Loh (1966), and Campbell (1968).

Johoda and Warren (1966) criticized Guttman's technique as being unidimensional, and therefore not capable of measuring complex attitudes. They also feel that a scale may be unidimensional for one group of individuals, but not necessarily for another. Guttman's latest contributions to scale construction and attitude measurement (i.e., facet design and nonmetric analysis) avoids many of the prior criticisms since they are multidimensional in nature and also include an a priori method of item construction.

Taylor (1971) reviewed new developments and changes in racial attitude research during the 1960's. Greenberg (1961) devised a scale to measure attitudes and problems occurring during integration. In an exploration of racial attitudes, Weiss (1961) developed an instrument to reveal

the stereotypes whites have of blacks and an opinion questionnaire to test dimensionality of racial attitudes. "Weiss concluded that the distinctions between descriptive and attitudinal traits implied dimensionality of racial attitudes" (Taylor, 1971, p. 20).

Guttman's Theoretical Structure: A Four-Level Theory

Guttman sees a need to build systematic theories in the social sciences to provide a basic framework for researchers. In the area of attitude research, he has attempted to provide an abstract framework by defining a measurable set of sub-universes underlying a structural analysis of intergroup behavior. Although Guttman based his theoretical formulations on interracial behavior, he states that his system can easily be extended to other groups (Guttman, 1959, p. 319).

Guttman's (1959) theory involves first a discussion of semantic structure and second, a statistical analysis of that structure. He feels that both analyses are necessary to relate more abstract conceptions to actual observation and experience.

From research completed by Bastide and van den Berghe (1957), Guttman abstracted definitions for the four sub-universes of attitudes. Because Bastide and van den Berghe's work dealt with interracial attitudes, the definitions involve whites and Negroes. The definitions were reordered by Guttman, and read as follows:

1.	Stereotype:	Belief of (a white subject) that his own group (excels-does not excel) in comparison with Negroes on (desirable traits).
2.	Norm:	Belief of (a white subject) that his own group (ought-ought not) interact with Negroes in (social ways).
3.	Hypothetical Interaction:	Belief of (a white subject) that he himself (will-will not) interact with Negroes in (social ways).
4.	Personal Interaction:	Overt action of (a white subject) himself (to-not to) interact with Negroes in (social ways) (Guttman, 1959, p. 32).

In delimiting the differences in each of the definitions, Guttman notes differences in three facets. "Each definition concerns a type of behavior of a subject vis-a-vis a type of intergroup behavior of a type of referent" (Guttman, 1959, p. 320). Each of these three facets in turn has two elements and, therefore, each is dichotomous as depicted in Table 12.

TABLE 12.--Facets on which Subuniverses Differ

(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

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 AxBxC, yielding a 2x2x2 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 profiles 1 and 2 have 2 elements in common (a_1b_1) and one different (c_1 and c_2), whereas, profiles 1 and 8 have no elements in common.

The capital letters A, B, and C depict the three facets, while the subscripts denote the respective elements. Thus $a_1b_1c_2$ reads: Belief (a_1) of a subject that his own group (b_1) interacts (c_2) with a specified attitude object. Similarly, $a_2b_2c_2$reads: Self or observed reports of a subject's overt action (a_2) of himself (b_2) interacting (c_2) with a specified attitude object.

The four subuniverses (Levels) that Guttman derived from Bastide and van den Berghe (1957) have been facetized as shown in Table 13.

TABLE 13.--Guttman Facet Profiles of Attitude Subuniverse

Subuniverse	Profile
1 Stereotype	$a_1b_1c_1$
2 Norm	$a_1b_1c_2$
3 Hypothetical Interaction	$a_1b_2c_2$
4 Personal Interaction	$a_2b_2c_2$

There is a rank ordering of facets present in the design; Guttman refers to it as a progression from a weak to a strong form of the subject's behavior vis-a-vis the attitude object. The more subscript '2' elements a profile contains the greater the strength of the attitude. Also, there is a progression down the subscale Levels, "stereotype" (Level 1), being the weakest, proceeding through to "personal interaction" (Level 4), the strongest i.e., $1<2<3<4$ moving down the Levels from weakest to strongest.

Facet analysis of the semantic structure provides a social psychological basis for predicting the structure of the empirical intercorrelation matrix of the above four Levels.

> One cannot presume 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 the 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: "Subuniverses closer to each other in the semantic scale of their definitions will also be closer statistically" (p. 324). Thus, the Contiguity Hypothesis predicts that the Levels that are adjacent to one another will correlate to a stronger degree than will Levels that are more distant from each other. In other words, "Normative Behavior" (Level 2) will correlate more highly with an adjacent Level, "Hypothetical Interaction"

(Level 3) than it will with "Personal Interaction" (Level 4), a more distant Level.

Table 14 illustrates the data obtained in Bastide and van den Berghe's (1957) study. The data have been rearranged by Guttman to correspond to his four-Level ordering, (Stereotype, Norm, Hypothetical Interaction, Personal Interaction). The structure of the table follows the simplex pattern, except for one reversal ($r_{4,3}$= .49 does not exceed $r_{4,2}$= .51). This slight error, Guttman states, could simply be due to sampling error and/or sampling bias; he does not see this error as contradicting the Contiguity Hypothesis. Further research validates this conclusion by Guttman ". . . research by Hamersma (1969) and Harrelson (1970) established a criterion of six reversals as being the maximum that could exist in a six by six matrix and still permit the simplex to be regarded as 'approximated'" (Dell Orto, 1970, p. 56). Guttman (1954b) also states that in actual practice, a perfect simplex is not to be expected.

TABLE 14.--Empirical Intercorrelation of Scores on the Four Subuniverses

Subuniverse	1 Stereotype	2 Norm	3 Hypothetical Interaction	4 Personal Interaction
1 Stereotype	--	.60	.37	.25
2 Norm	.60	--	.68	.51
3 Hypothetical Interaction	.37	.68	--	.49
4 Personal Interaction	.25	.41	.49	--

Hamersma (1969) explains that the 'simplex' is analyzed to ascertain the relationship among the Levels. As one proceeds down the Levels, the facets change; however, to enable the simplex ordering to be possible only one facet is changed for each successive Level change. A simplex is defined by Guttman (1954-55) as "sets of scores that have an implicit order from 'least complex' to 'most complex'" (p. 400). In a simplex matrix the ordering of the Levels (correlations, etc.) is predicted, but the intensity or magnitude of the correlation is not. Table 15 presents an example of a hypothetical correlation matrix with a simplex structure, designed by Hamersma.

TABLE 15.--Hypothetical Matrix of Level-By-Level Correlations Illustrating the Simplex Structure

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

Note: One does not attempt to predict the magnitudes of each correlation coefficient. The simplex requirements do not necessitate either identical mathematical differences among various correlations or identical correlations between adjacent levels, so that the bottom row of the matrix reading from left to right could contain such figures as .10, .32, and .49.

Guttman (1959) suggested that to increase the predictability of his theoretical model, it would be beneficial to (a) enrich the facet design and (b) place these behaviors (Levels) in a broader context. Jordan's five-facet, six-Level

design encompasses the merits of both these suggestions. He enriched the facet design by adding two additional facets and, hence, two additional Levels of behavior. By including facets that demonstrated more of the affective and conative dimensions of behavior, he placed the theory in a broader, feeling-action oriented context, encompassing Guttman's second suggestion.

Jordan's Six-Level Adaptation

Jordan's five-facet, six-Level theory encompasses Guttman's three-facet, four-Level design, expanding the theory in the affective and conative domain. Specifically, Jordan maintains Guttman's four original Levels, but adds two new Levels toward the lower end of Guttman's scale. For a visual explanation of Jordan's six-Level theory see Tables 16 and 17. To compare Jordan's facet system with that of Guttman's, compare Tables 16 and 17 with Tables 12 and 13. Guttman included four attitude dimension categories: Stereotype, Norm, Hypothetical Interaction, and Personal Interaction (Table 13). According to McGuire (1969), these facets are primarily concerned with cognitive and affective behavior. Only the last Level, Hypothetical Interaction, includes any conative material. It is at this point that Jordan visualized the need to expand Guttman facet theory. Jordan places more emphasis on the affective and conative elements of attitude-behavior. His

theory, while including Guttman's four Levels (cognitive and affective elements), extends Guttman into the realm of conative behavior. His two additional Levels, Personal Feeling (Level 5) and Actual Personal Action (Level 6) extend the theory to 'real,' observable overt behavior. These Levels are evaluating the subject's actual feelings and actions, instead of his perceived thoughts, beliefs, and opinions (as measured in the first four Levels). They appear to be the crucial Levels at which attitudinal change occurs. Tables 17 and 18 contain a more explicit presentation of Jordan's six Levels and a comparison of Guttman and Jordan facet designations.

TABLE 16.--Jordan Facets Used to Determine Joint[a] Struction of an Attitude Universe

(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 (I)	b_2 experience (overt behavior)	c_2 self (mine/my)	d_2 interaction	e_2 operational

[a]Joint struction is operationally defined as the ordered sets of the five facets from low to high (subscript 1's are low) across all five facets simultaneously.

TABLE 17.--Joint Level, Profile Composition, and Labels for Six Types of Attitute Struction

Subscale Type-Level	Struction Profile[a]	Descriptive Joint Term
1	$a_1\ b_1\ c_1\ d_1\ e_1$	Societal Stereotype
2	$a_1\ b_1\ c_1\ d_2\ e_1$	Societal Norm
3	$a_2\ b_1\ c_1\ d_2\ e_1$	Personal Moral Evaluation
4	$a_2\ b_1\ c_2\ d_2\ e_1$	Personal Hypothetical Action
5	$a_2\ b_2\ c_2\ d_2\ e_1$	Personal Feeling
6	$a_2\ b_2\ c_2\ d_2\ e_2$	Personal Action

[a]Based on facets of Table 16.

Tables 18 and 19 propose a structioned definitional or semantic system for the relationships between the six scale Levels. According to Jordan (1971a), the Cartesian product of the five two-element/facets of Table 16 yields 32 possible profiles (Table 21). As shown in Table 19, six of these profiles were chosen as psychologically relevant, potentially capable of instrumentation, and possessing a specific relationship among themselves--a simplex relationship. Maierle (1969) presents an extensive discussion of the 32 profiles, the specific rules by which the 12 profiles in Figure 1 are retained, the rationale for choosing six of these 12 profiles for the six Levels, and the seven "semantic paths" possible between these 12 profiles; i.e., the six Levels presented in Table 19, agree with Maierle's semantic path C although they were extant prior to that.

TABLE 18.--Comparison of Guttman and Jordan Facet Designations.

Designation	Facets[a] in Jordan Adaptation				
	A	B	C	D	E
Jordan:	Referent	Referent Behavior	Actor	Actor's Intergroup Behavior	Domain of Actor's Behavior
	a_1 others	b_1 belief	c_1 others	d_1 comparison	e_1 hypothetical
	a_2 self (I)	b_2 experience (overt behavior)	c_2 self (mine/my)	d_2 interaction	e_2 operational
Guttman:	--	Subject's Behavior	Referent	Referent's Intergroup Behavior	--
	--	b_1 belief	c_1 subject's group	d_1 comparative	--
	--	b_2 overt action	c_2 subject himself	d_2 interactive	--

[a]If the facets of Table 16 are expressed as follows the combinations of Table 17 are semantically expressed in the differential statements of Table 22:

Facet A: o or i; Facet B: b or e; Facet C: o or m; Facet D: c or i; Facet E: h or p.

TABLE 19.--Joint Level, Profile Composition, and Labels for Six Types of Attitude Struction.[a]

Subscale Type-Level	Profile by Notational[c] System in Table 17	Profile by Definitional[b] System in Table 22	Attitude Level Descriptive Term
1	o b o c h	a_1 b_1 c_1 d_1 e_1	Societal stereotype
2	o b o i h	a_1 b_1 c_1 d_2 e_1	Societal norm
3	i b o i h	a_2 b_1 c_1 d_2 e_1	Personal moral evaluation
4	i b m i h	a_2 b_1 c_2 d_2 e_1	Personal hypothetical action
5	i e m i h	a_2 b_2 c_2 d_2 e_1	Personal feeling
6	i e m i p	a_2 b_2 c_2 d_2 e_2	Personal action

[a]Based on facets of Table 16.

[b]See Table 22 for definitional statements.

[c]See Table 17 for facets and subscript profiles.

Maierle (1969) states that only 12 of the 32 possible combinations appear to be semantically and logically consistent. Construction of the six level Attitude-Behavior Scale: Mental Retardation (ABS-MR) used in Jordan's research was guided by the six combinations of facet elements shown in Table 17. The six profiles were chosen from the twelve potential combinations because they appeared potentially capable of instrumentation, the relevance implied in the six Levels or 'types,' and because they form a simplex order. The six ABS-MR sub-scales range on an abstract-impersonal to concrete-behavioral continuum--from a stereotypic Level to reports of actual behavioral interaction with the retarded; correspondingly, each profile moving from Level 1 to Level 6 is characterized by one additional strong facet element in a range from no strong elements to all strong elements, as is illustrated in the definitions and examples in Table 17.

It is the intention of the following definitions and examples to make clear Jordan's six-Level progression from the cognitive through the affective domain, and finally arriving at the conative-action Level of attitude-behaviors. For a graphic representation, including profiles, see Table 22.

TABLE 20.--Permutations of Five Two-element Facets[a] of Table 16.

Permutations	Facets[b]				
	A	B	C	D	E
1	1	1	1	1	1
2	1	1	1	2	1
3	2	1	1	1	1
4	2	1	1	2	1
5	1	1	2	1	1
6	1	1	2	2	1
7	2	1	2	1	1
8	2	1	2	2	1
9	1	2	1	1	1
10	1	2	1	2	1
11	2	2	1	1	1
12	2	2	1	2	1
13	1	2	2	1	1
14	1	2	2	2	1
15	2	2	2	1	1
16	2	2	2	2	1
17	1	1	1	1	2
18	1	1	1	2	2
19	2	1	1	1	2
20	2	1	1	2	2
21	1	1	2	1	2
22	1	1	2	2	2
23	2	1	2	1	2
24	2	1	2	2	2
25	1	2	1	1	2
26	1	2	1	2	2
27	2	2	1	1	2
28	2	2	1	2	2
29	1	2	2	1	2
30	1	2	2	2	2
31	2	2	2	1	2
32	2	2	2	2	2

[a]Subscript "1" indicates weak element; "2" indicates strong element.

[b]See Table 16 for facets.

TABLE 21.--Combinations of Five Two-element Facets[a] and Basis of Elimination.

Combinations			Facets and Subscripts					Basis[c] of Elimination[d]				
No.[b]	In Table 16	In Table 17	A	B	C	D	E					
1	1	Level 1	o	b	o	c	h					
2	2	Level 2	o	b	o	i	h					
3	3	--	i	b	o	c	h					
4	4	Level 3	i	b	o	i	h					
5	5	--	a	b	m	c	h					
6	6	--	o	b	m	i	h					
7	7	--	i	b	m	c	h					
8	8	Level 4	i	b	m	i	h					
9	-	--	o	e	o	c	h		2			
10	9	--	o	e	o	i	h					
11	-	--	i	e	o	c	h	1	2			
12	-	--	i	e	o	i	h	1				
13	-	--	o	e	m	c	h	1	2			
14	-	--	o	e	m	i	h	1				
15	-	--	i	e	m	c	h		2			
16	10	Level 5	i	e	m	i	h					
17	-	--	o	b	o	c	p			3	4	
18	-	--	o	b	o	i	p				4	
19	-	--	i	b	o	c	p			3	4	
20	-	--	i	b	o	i	p				4	
21	-	--	o	b	m	c	p			3	4	
22	-	--	o	b	m	i	p				4	
23	-	--	i	b	m	c	p			3	4	
24	-	--	i	b	m	i	p				4	
25	-	--	o	e	o	c	p		2	3		
26	11	--	o	e	o	i	p					
27	-	--	i	e	o	c	p	1	2	3		
28	-	--	i	e	o	i	p	1				
29	-	--	o	e	m	c	p	1	2	3		
30	-	--	o	e	m	i	p	1				
31	-	--	i	e	m	c	p		2	3		
32	12	Level 6	i	e	m	i	p					

[a] See Table 16 for facets.

[b] Numbering arbitrary, for identification only

[c] Logical semantic analysis as follows:

Basis 1: an "e" in facet B must be preceded and followed by equivalent elements, both "o"; or "i" in facet A or "m" in facet C.

Basis 2: a "c" in facet D cannot be preceded by an "e" in facet B.

Basis 3: a "c" in facet D cannot be followed by a "p" in facet E.

Basis 4: a "p" in facet E cannot be preceded by a "b" in facet B.

[d] See text for rationale.

TABLE 22.--Five-Facet Six-Level System of Attitude Verbalizations:[a] Levels, Facet Profiles, and Definitional Statements for Twelve Combinations.

Level	Facet Profile	No. in Table 21	No.[b]	Definitional Statement[c]	Descriptive Name[d]
1	o b o c h $a_1b_1c_1d_1e_1$	1	0	Others believe others' comparisons hypothetically **	Societal stereotype (group assigned group status)
2	i b o c h	3	1	I believe others' comparisons hypothetically	Personally-assigned group status
	o b o i h $a_1b_1c_1d_2e_1$	2		Others believe others' interactions hypothetically **	Societal norm
	o b m c h	5		Others believe my comparisons hypothetically	Group-assigned personal status
3	i b o i h $a_2b_1c_1d_2e_1$	4	2	I believe others interactions hypothetically **	Personal moral evaluation (perceived values)
	i b m c h	7		I believe my comparisons hypothetically	Self-concept (personally assigned personal status)
	o b m i h	6		Others believe my interactions hypothetica hypothetically	Proclaimed laws (group expectations)
	o e o i h	9		Others experience others interactions hypothetically	Group identity (actual group feelings)
4	i b m i h $a_2b_1c_2d_2e_1$	8	3	I believe my interactions hypothetically **	Personal hypothetical action
	o e o i p	11		Others experience others comparisons hypothetically	Actual group action
5	i e m i h $a_2b_2c_2d_2e_1$	10	4	I experience my interactions (feelings) hypothetically **	Personal feeling
6	i e m i p $a_2b_2c_2d_2e_2$	12	5	I experience my interactions (overt behavior) operationally **	Personal action

**Combinations used in the ABS.

[a]Cf. Tables 16 and 17.

[b]No. = number of strong elements in Level.

[c]Words in parentheses are part of redundant but consistent statements.

[d]Alternate names in parentheses indicate relationships of various level members.

THE COGNITIVE DIMENSION OF ATTITUDE-BEHAVIOR

Level 1

Societal Stereotype (a_1 b_1 c_1 d_1 e_1). Other whites believe others hypothetically compare to Negroes.

Directions: Other Whites believe the following things about Negroes as compared to Whites:

Eg.: Negroes can be trusted with money

(1) less than Whites
(2) about the same as Whites
(3) more than Whites

Level 2

Societal Interactive Norm (a_1 b_1 c_1 d_2 e_1). Other whites believe others hypothetically (should) interact with Negroes.

Directions: Most Whites generally believe the following about interacting with Negroes:

Eg.: Whites believe they can trust Negroes with money

(1) disagree
(2) uncertain
(3) agree

THE AFFECTIVE DIMENSION OF ATTITUDE-BEHAVIOR

Level 3

Personal Moral Evaluative (a_2 b_1 c_1 d_2 e_1). I believe other whites hypothetically (should) interact with Negroes.

Directions: In respect to Negroes, what do you believe others think is right or wrong:

Eg.: To trust Negroes with money is

(1) usually wrong
(2) undecided
(3) usually right

THE AFFECTIVE AND CONATIVE DIMENSIONS OF ATTITUDE-BEHAVIOR[1]

Level 4

Personal Hypothetical Behavior (a_2 b_1 c_2 d_2 e_1). I believe I hypothetically (would) interact with Negroes.

Directions: In respect to a Negro person, would <u>you yourself</u>:

Eg.: I would trust Negroes with money

(1) no
(2) undecided
(3) yes

Level 5

Personal Feelings (a_2 b_2 c_2 d_2 e_1). I experience (affect) when I hypothetically interact with (think about) Negroes.

Directions: How do <u>you actually feel</u> toward Negroes:

Eg.: When Whites trust Negroes with money I feel

(1) bad
(2) indifferent
(3) good

THE CONATIVE DIMENSION OF ATTITUDE-BEHAVIOR

Level 6

Personal Action (a_2 b_2 c_2 d_2 e_2). I have experience myself in operationally (actually) interacting with Negroes.

Directions: <u>Experiences</u> or contacts with Negroes:

Eg.: I have trusted Negroes with money

(1) no
(2) uncertain
(3) yes

A mapping sentence is used to provide a concise, operational definition for the study. Figure 1 represents

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[1]The two Levels encompassed under this category (Levels 4 and 5) include both affective and conative elements of attitude-behavior.

the a priori use of facet theory in the development of an Attitudes Toward Specified Persons Scale. The mapping sentence for the first scale developed by Jordan, Attitude Behavior Scale--Mental Retardation (ABS-MR) is illustrated in Figures 2 and 3. The mapping sentence that the present study is based on, Attitude Behavior Scale--Black/White (ABS-B/W) is shown in Figure 4.

Attitude-Behavior Scales (ABS)

The instrument employed in this thesis was an outgrowth of Jordan's attitude-behavior research. Construction of the scales was based on facet theory and construction of the items followed a systematic a priori method instead of by the Likert method of intuition (i.e., even though the Likert procedure uses item analysis after the initial selection) or by the Thurstone use of judges. Guttman's (1959) facet theory specifies that the attitude universe represented by the item content can be substructured into behavioral profiles which are systematically related according to the number of identical conceptual or semantic elements they hold in common. The substructuring of an attitude-behavior universe into facets and elements facilitates a sampling of items within each of the derived profiles and also enables the prediction of relationships between various profiles of the universe. This should also provide a set of clearly defined profile areas for cross-cultural comparisons.

In constructing the first scale, ABS-MR, Jordan (1970) "postulated that attitudes involve not only objective-specificity but situation-specificity and object-subject relationships" (p. 48). In the case of the MR scale, the object was the mentally retarded, situations included such areas as experiences, education, personal characteristics, and relationships between the object and the actor (self or others).

Guttman (1959) suggests a common semantic meaning for the five facets of Table 16; a progression from a weak to a strong form of behavior of the subject vis-a-vis the attitude object--in this case, the mentally retarded. Examination of Table 16 indicates the rationale of this ordering system.

Facet A--the referent 'other' is weaker than 'self' (I) in being less personal.
Facet B--'belief' is weaker than 'experience' (overt behavior) in being 'passive' rather than 'active.'
Facet C--referring to the behavior of one's 'self' (mine/my) rather than that of 'others' is stronger in that it implies personal involvement.
Facet D--'comparative' behavior is weaker than 'interactive' behavior. It does not imply social contact, and a comparison is more passive than interaction.
Facet E--'hypothetical' behavior is weaker than 'operational.' It does not imply acting out behavior.

The above analysis is restricted to the ordering implied in the five facets of Table 16--what Guttman is now calling joint struction. However, an additional question can be asked--Is it possible to establish an ordering

principle so that the inter-item content itself can be structioned or "ordered" with some explicit a priori semantic meaning: i.e., rather than attempting to a posteriori evolve the meaning by some procedure such as factor analysis?

Rokeach (1968) has independently developed and made explicit the idea implied in the Jordan-Guttman paradigm of Figure 1--the facet "y" of "condition" in Figure 1 is equivalent to Rokeach's "situation;" one could also argue that the entire lateral dimension of Figure 1 (facets F-J) is equivalent to Rokeach's "object-specificity."

The rationale used in the selection of the item content of the ABS-MR (and of the other Attitude Behavior Scales that followed) attempted to "order" the item content via three principles:

1. Ego involvement: Cognitive-affective. Is the "attitude object in situation y" dealt with cognitively or affectively?
2. Social distance: Distant-close. Is the "attitude object in situation y" distant or close to one's self?
3. Relevance: Low-high. Is "situation y" relevant and/or important to the subject?

Consistent with the above discussion of the weak-strong principle developed in Table 22, a positive or stronger attitude would be expressed by a subject who "agreed with or chose" items that dealt with the attitude object in "highly important situations that involved the self in close interpersonal action."

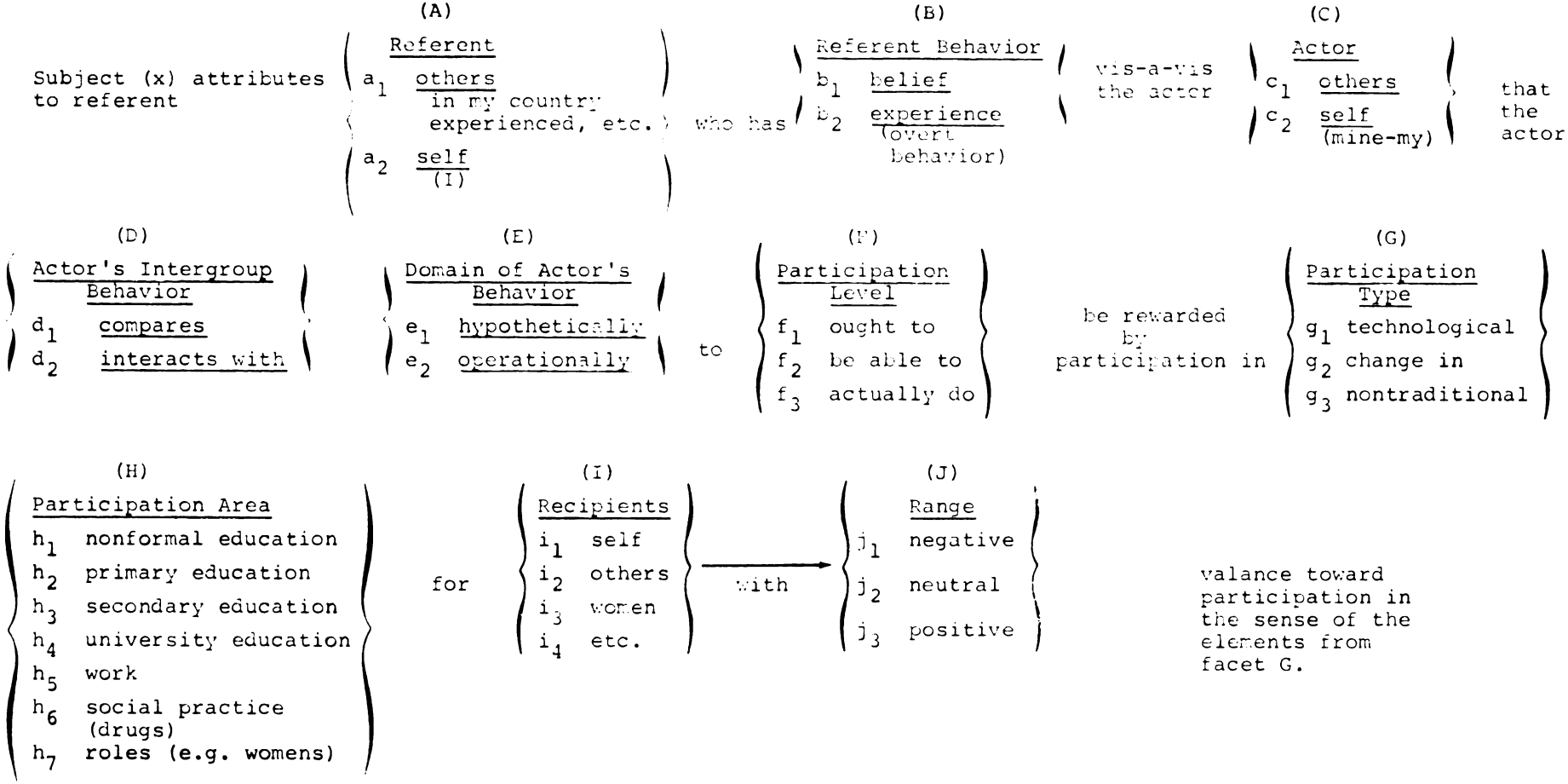
Two types of data analysis are indicated: (a) an analysis of the facets across the six Levels, i.e., whether

or not the simplex is obtained, and (b) an analysis of the scalar nature of the content within each of the six subscales. The first analysis deals with the joint dimension and the second with the lateral dimension (Jordan, 1968). The section in this chapter titled "The Simplex Approximation and the ABS" contains simplex data for the several different scales thus far developed by other researchers using the scale.

Joint struction refers to the difference between subscales or Levels, or facets A through E of Figures 1-4. Six additional facets, F through K, were added to differentiate item content within Levels. These additional facets denote item content and are labeled lateral struction. The complete mapping sentence for the family of scales constructed, or to be constructed, on this a priori basis is given in Figure 1. Every item on every Level of a form of the ABS corresponds to a combination of elements of each and every facet A through K. The ordering system for lateral struction, however, has not been developed as fully as has the system for joint struction.

Jordan's (1970) research with the ABS-MR focused on five questions or purposes: "(a) that the ABS-MR attitude levels exhibit a simplex structure, (b) that relevant object-situations were selected, (c) that selected variables are effective predictors of favorable attitudes, (d) that the ABS-MR can differentiate between groups, and (e) that the ABS-MR is acceptable cross-culturally equivalent and comparable" (pp. 50-51).

Figure 1.--Mapping Sentence[a] for the Facet Analysis of Joint and Lateral Dimensions of Attitude-Behaviors Toward Participation in Specified Activities.

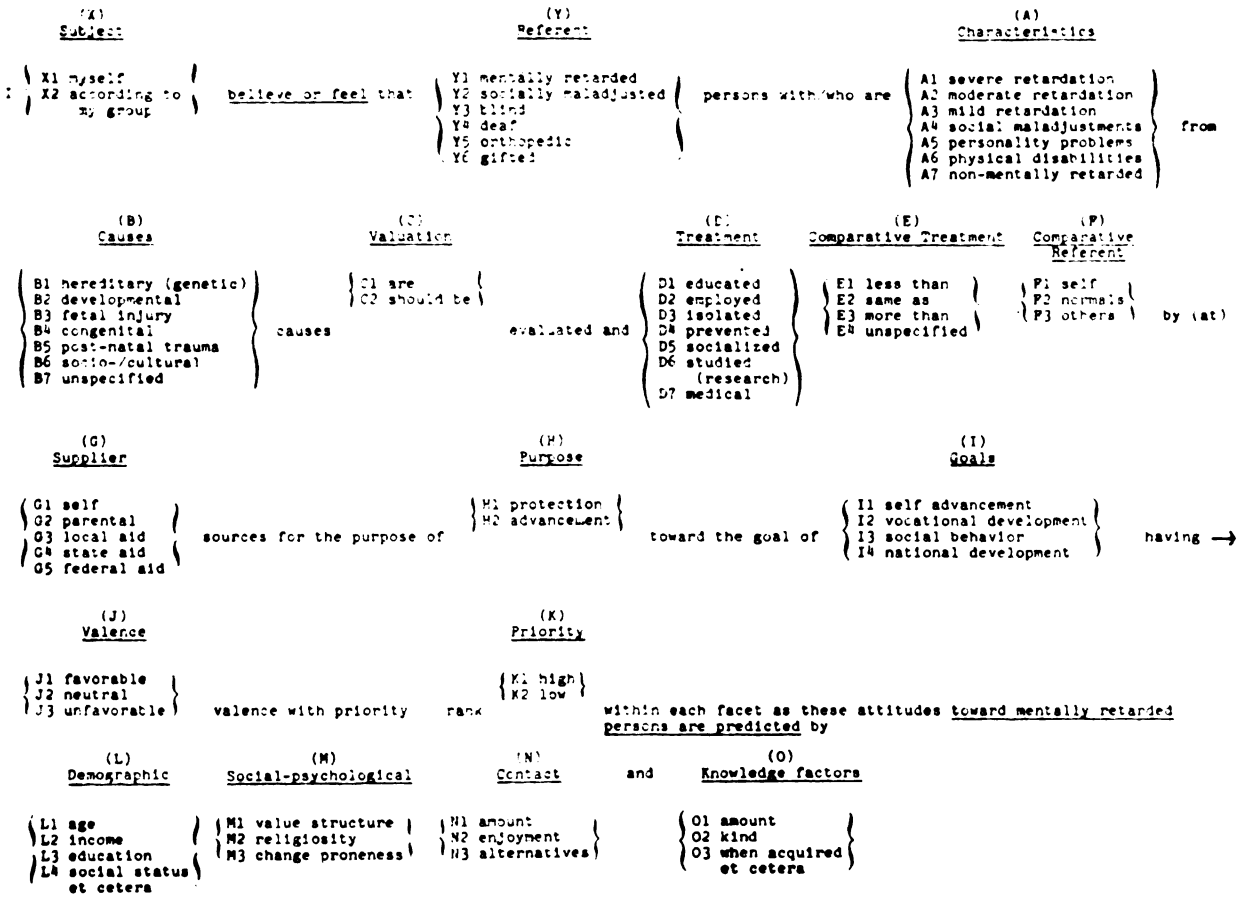


[a]Revised at the: First Interamerican Seminar on Educational Research
San Jose, Costa Rica
March 6-24, 1972

[b]Facets A through E denote joint struction.

[c]Facets F through J denote lateral struction.

Figure 2.--A Mapping Sentence for the Facet[1] Analysis of Attitudes Toward Mentally Retarded Persons.



[1]The facets were evolved in cooperation with twenty practicing school psychologists who were working primarily with the mentally retarded and who were in a graduate seminar at Michigan State University; Spring, 1967. The content validity of the appropriateness of the facets (A through I) can be assumed as these psychologists stated that these facets represented the major issues in their work with the mentally retarded.

John E. Jordan
College of Education
Michigan State Univ.
June 1, 1967

Fig. 3. A mapping sentence of the conjoint, disjoint, and response mode struction facets used to structure the Attitude Behavior Scale-Mental Retardation.

JOINT 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 (d) }	who has { b_1 belief; b_2 experience (overt behavior) }	vis-a-vis the actor { c_1 others; c_2 self (mine/my) }	that the actor { d_1 compare (s); d_2 interact (s) }	{ e_1 hypothetically; e_2 operationally }

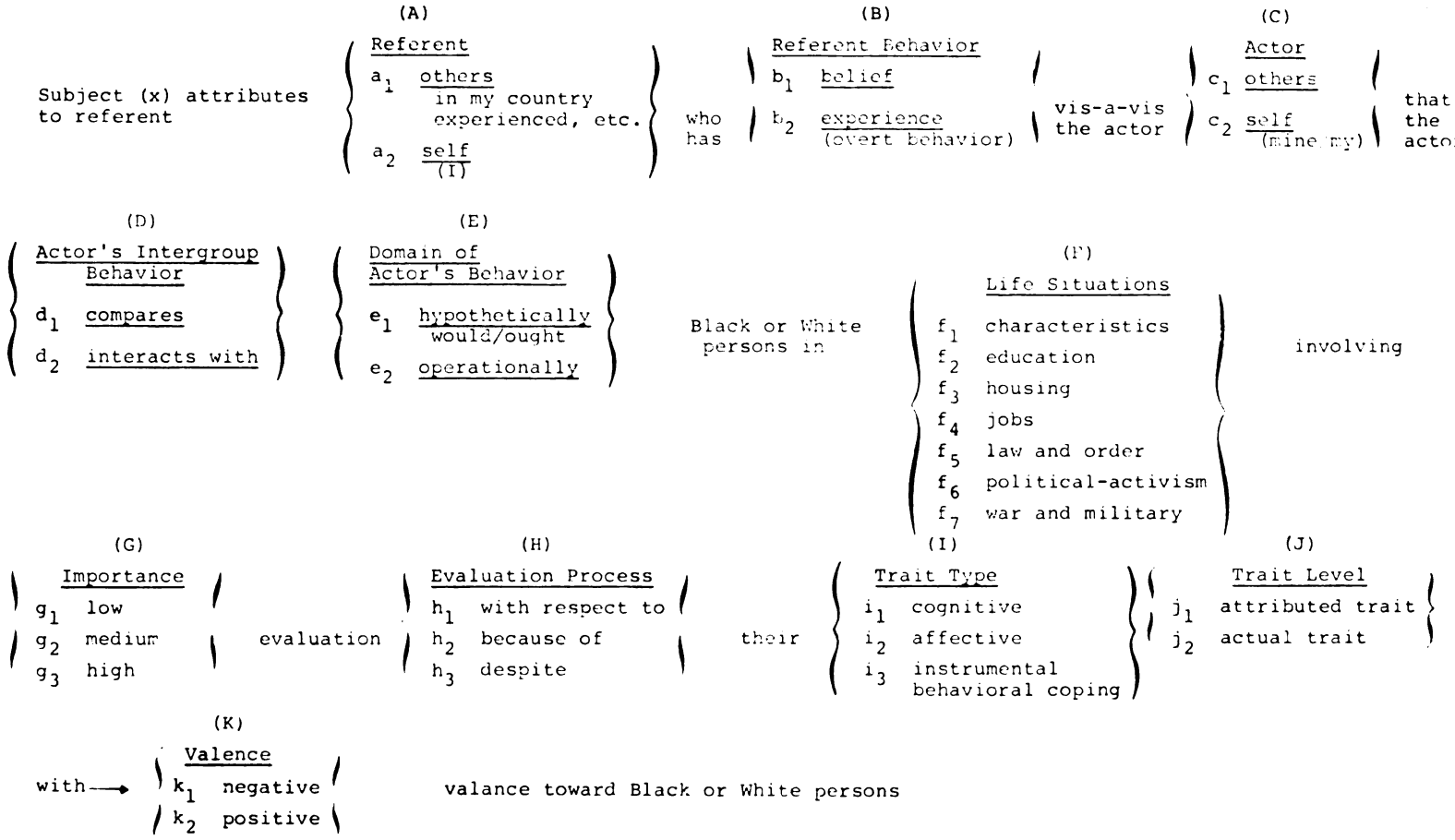
LATERAL STRUCTION

(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.

Figure 4.--Mapping Sentence[a] for the Facet Analysis of Joint[b] and Lateral[c] Structure of Blacks' and Whites' Attitudes Toward Each Other.



[a]Evolved by Hamersma and Jordan.

[b]Joint struction involves facets "A" through "E."

[c]Lateral struction involves facets "F" through "K."

Jordan's research on attitude-behaviors toward the mentally retarded has implications in three areas of concern: (a) methodology, (b) determinants, origins or predictors of attitude-behaviors, and (c) implications for attitude-behavior change research. Jordan (1972) believes that facet theory can be used in defining a problem; structuring relationships within and between variables; dealing with the problems of relevancy, equivalency, and comparability; and assisting in the analysis and interpretation of empirical data. Other attributes and findings of Jordan's research are that certain aspects of attitude-behavior are cross-culturally invariate, i.e., the simplex is determined largely by the structure of the object-subject relationship, 'certain' aspects of attitude-behavior are object specific, situation specific, and/or culture specific, and that attitude change must be approached multidimensionally: knowledge being more related to Stereotypic and Normative Levels and contact, values, and enjoyment factors more related to Actual Feeling and Action (Behavior) Levels.

The ABS-MR is the first of a family of scales being developed by Jordan (1968) using the model presented in Table 17. Scales have already been developed toward such diverse attitude objects as the blind, deaf, war disabled in Vietnam, drug users, and racial-ethnic groups (Erb, 1969; Frechette, 1970; Hamersma, 1969; Harrelson, 1970; Harrelson, Jordan & Horn, 1972; Jordan, 1970, 1971a, 1971b;

Jordan and Maierle, 1969; Kaple, 1971; Maierle, 1969; Poulos, 1970; Vurdelja, 1970; Williams, 1970). The completed mapping sentence for the family of scales constructed, or to be constructed, on this a priori facet theory basis is given in Figure 1. The attitude object of interest (i.e., the mentally retarded in Figure 3, and racial groups in Figure 4) is simply substituted for "specified" persons in Figure 2.

Other Attitude Behavior Scales (Jordan, 1970, pp. 47-48) currently available are as follows:

1. ABS-BW/WN.....Blacks toward whites and whites toward Negroes in seven areas
    - (C) Characteristics (Personal)
    - (E) Education
    - (H) Housing
    - (J) Jobs
    - (L) Law and Order
    - (P) Political Activism (Racial)
    - (W) War and Military
    - (G) General (two items from each of the above seven)

2. ABS-SAF....."Africans"/Whites (in South Africa)
    - (G) General, minus L, P, and W items of the ABS-VW/WN

3. ABS-MP/PM.....Moari/Pakeha (New Zealand)
    - (E) Education
    - (G) General

4. ABS-MI or EDP.....Mentally Ill or Emotionally Disturbed Persons

5. ABS-DR.....Deaf

6. ABS-ABE.....Undereducated Adults (Adult Basic Education)

7. ABS-CES.....Black vs. White Cooperative Extension Service farm agents

8. ABS-BL.....Blind

9. ABS-WD.....War Disabled (in Viet Nam)

10. ABS-DU.....Drug Users

11. ABS-ENV.....Environment

12. ABS-WOM.....Role of Women[a]

13. ABS-TEC.....Technical Education[a]

14. ABS-EDC.....Educational Change[a]

An ideal, complete research project, as Guttman has elsewhere suggested, would consist of observing a value for each subject on each variant of facets F through K for each of the six Levels A through E (see Figures 1-4). Guttman has further suggested that any coherent theory referring to empirical research can be expressed in a similar mapping sentence (Figure 5). He further states.

> Lack of theoretical clarity as to the specifications of the facets of the mapping may be the situation that often impedes the connection between abstract theory and empirical work (Guttman, 1959, p. 323).

Clearly the ABS-MR scale falls short of the ideal, complete research project suggested by Guttman. Nevertheless, it represents one of the few such attitude scales constructed on an a priori basis according to Guttman's facet theory.

The ABS used in the present research, measuring attitudes of blacks toward whites and whites toward blacks was constructed by Hamersma and Jordan (1969) and revised

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[a]Scales 12-14 were developed with support by the Organization of American States at the First Interamerican Seminar on Educational Research, San Jose, Costa Rica, March 6-24, 1972.

Figure 5.--A Mapping Sentence[a] for Strategies of Theory Development.

Investigator (x) uses a strategy for { a_1 receiving; a_2 implementing; a_3 evaluating } ideas for his

construction of a { b_1 definition; b_2 specification; b_3 rationale; b_4 hypothesis } for a construct { c_1 definition; c_2 specification; c_3 rationale; c_4 hypothesis }

of his theory (y) through treatment by { d_1 assertion; d_2 deletion; d_3 substitution; d_4 intension; d_5 extension } of aspect (z) of

{ e_1 conceptual; e_2 empirical } constructs that were constructed by { f_1 others; f_2 himself }

$\longrightarrow$ { g_1 high; g_2 medium; g_3 low } level of strategic formalism.

A Condensation of the Sentence

INVESTIGATOR (x) / uses IDEA STRATEGY (a) / for his CONSTRUCTION OF (b) / for CONSTRUCT (c) / of his THEORY (y) / through TREATMENT (d) / of ASPECT (z) / of CONSTRUCTS (e) / of CONSTRUCTER (f) / $\longrightarrow$ LEVEL (g) of strategic FORMALISM.

An Abstraction of the Sentence

XABCYDZEF $\longrightarrow$ $a_0{}^G$

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[a]From Guttman (1971).

by Dell Orto (1970). Attitudes were measured in seven separate attitude content areas. An eighth scale (G-General) contained two items from each of the above seven content areas. The areas were chosen on the basis of a number of sources. The Report of the National Advisory Commission on Civil Disorders (1968), a survey of twenty major cities, lists the most frequently and consistently cited grievances of residents of ghetto communities. As stated by the Commission's report, these grievances remained consistent throughout every major city that was surveyed. "As the Commission stated, these grievances were linked in a major way to the attitudes that blacks and whites hold in relation to each other. They ranked the deepest grievances into three levels of relative intensity and presented them as follows" (Hamersma, 1969, p. 84):

First Level of Intensity

1. Police Practices
2. Unemployment and underemployment
3. Inadequate housing

Second Level of Intensity

4. Inadequate education
5. Poor recreation facilities and programs
6. Ineffectiveness of the political structure and grievance mechanisms

Third Level of Intensity

7. Disrespectful white attitudes
8. Discriminatory administration of justice
9. Inadequacy of federal programs
10. Inadequacy of municipal services
11. Discriminatory consumer and credit practices
12. Inadequate welfare programs

To comprehend more fully what the Commission meant by these categories, two of them ("police practices" and "inadequate education") are described here as they were explained in the Report (1968):

> Police practices were, in some form, a significant grievance in virtually all cities and were often one of the most serious complaints. Included in this category were complaints about physical or verbal abuse of Negro citizens by police officers, the lack of adequate channels for complaints against the police, discriminatory police employment and promotion practices, a general lack of respect for Negroes by police officers, and the failure of police departments to provide adequate protection for Negroes.
>
> The educational system was a source of grievance in almost all the 20 cities and appeared to be one of the most serious complaints in half of them. These grievances centered on the prevalence of de facto segregation, the poor quality of instruction and facilities, deficiencies in the curriculum in the public schools (particularly because no Negro history was taught), inadequate representation of Negroes on school boards, and the absence or inadequacy of vocational training (p. 144).

In addition to these grievances cited by the Report, Hamersma reviewed additional research (Brink and Harris, 1964; Brink and Harris, 1967; Shaw and Wright, 1967; CBS News, 1968; and Maccoby and Funkhouser, 1968) in the area of racial attitudes and racial discontent. These reviews cited similar areas such as housing, personal characteristics, law enforcement, and unemployment as crucial. Hamersma used these sources, the Report's grievance levels, and suggestions from personnel of the Urban Adult Education Institute and the Foundation for Racial Equality: In

Memory of Martin Luther King, Jr. in Detroit,[1] to construct the scales dealing with seven attitude content areas: (a) Characteristics-Personal, (b) Education, (c) Housing, (d) Jobs, (e) Law and Order, (f) Political Activism-Racial, (g) War and Military.

For each of the seven separate attitude content areas, a six-Level scale was constructed in accordance with Jordan's six-Level adaptation (Table 6) of Guttman's original four-Level paradigm for attitude item construction. Each attitude content area scale contained the six Levels of: (a) Societal Stereotype, (b) Societal Norm, (c) Personal Moral Evaluation, (d) Personal Hypothetical Action, (e) Personal Feelings, and (f) Actual Personal Action, as shown in Table 6.

The difficulties in constructing items and building an item pool from which to select items for an attitude scale or survey has been succinctly put by Ostrom (1971-1972, pp. 593-594).

> Problems of item construction were recognized by the earliest workers in attitude measurement. At least five papers on this subject had appeared prior to 1940. Unfortunately, the guidance offered by these investigators did not extend beyond listing grammatical and stylistic considerations; classifying items into such categories as belief, judgment, attitude, and fact; and recommending that all possible

---

[1]The Urban Adult Education Institute and the Foundation are concerned with providing adult education to people, mostly black, who have not completed school. They provided assistance in several phases of Hamersma's study.

> attitude stands be represented in the pool. Techniques suggested for item collection by these sources are limited to such informal suggestions as interviewing respondents who are known to have differing attitudes, reading relevant published sources, and relying on one's own command of the issues involved. Guidelines provided by more recent treatments of attitude measurement do not provide any more advanced instructions for item construction.

Ostrom (1971-1972, p. 594) states that "the central problems in assemblying an item pool lie in defining a universe of content and in insuring an adequate sampling of that universe."

The Simplex Approximation and the ABS

As previously stated in discussion of the Contiguity Hypothesis, subuniverses closer to each other in the semantic scales of their definitions will be closer statistically.

Kaiser (1962) suggests a procedure for testing a simplex approximation: "for scaling the variables of a Guttman simplex . . . the procedure . . . orders the variables. A measure of goodness of fit of the scale to the data is suggested" (p. 155).

Kaiser's (1962) approach may be seen as performing two functions: (a) a "sorting" of virtually all possible adjacent pairs of matrix entrees so as to generate the "best" empirically possible simplex approximation; and (b) an assessment of a descriptive statistic, with a range of 0.00 to 1.00.

A computer program was developed which (a) re-ordered the adjacent pairs of level members of each matrix, by

Kaiser's (1962) procedure, so as to generate the best empirically possible simplex approximation; and (b) calculated $\underline{Q}^2$ for the hypothesized ordering of and for the empirically best ordering of each matrix.

Appropriate likelihood ratios are not yet developed to fully assess the simplex approximation. Mukherjee (1966) suggests a method which appears appropriate for matrices of equally spaced correlations but neither Maierle (1969) and Jordan's (1968) facet theory nor the actual data suggest that the matrices in the present study have equally spaced entities. Harrelson (1969) discusses the $\underline{Q}^2$ method in detail.

Hamersma (1969) suggested that "6-reversals" should be the maximum possible in a 6x6 data matrix to still consider it as 'approximating' a simplex. By the "6-reversal" criteria a $\underline{Q}^2$ value of .60 would appear minimal and preferably a value of .70 for a 6x6 matrix to be acceptable as a simplex (Jordan, 1970). As indicated in Table 23 (matrix 12.4), the highest $\underline{Q}^2$ value is for an ordered matrix containing both equal-interval and largest correlation values. Thus far, the results of the ABS appear quite favorable. Many of the early studies using the MR scale reached this level of simplex approximation, and more recent modifications of the ABS have yielded $\underline{Q}^2$ scores approaching 1.00.

TABLE 23.--Analysis of Theoretical Correlations[a] of "Perfectly Ordered" Matrices With Equal and Unequal Differences Between Correlations.

Descriptive Term		Unequal Differences	Equal Differences	Equal Differences
Matrices are "Scrambled"	Scrambled	Original Q^2 = .40 matrix 12.1 -- 98 -- 20 55 -- 87 63 07 -- 13 37 93 02 -- 47 80 99 28 72 --	Original Q^2 = .561 matrix 12.3 -- 90 -- 70 80 -- 90 80 60 -- 60 70 90 50 -- 80 90 90 70 80 --	Original Q^2 = .686 matrix 12.5 -- 60 -- 40 50 -- 60 50 40 -- 30 40 60 20 -- 50 60 60 30 50 --
Matrices are "Ordered"	1 2 3 4 5 6	Best Q^2 = .868 matrix 12.2 -- 87 -- 63 98 -- 28 47 80 -- 07 20 55 99 -- 02 13 37 72 93 --	Best Q^2 = .994 matrix 12.4 -- 90 -- 80 90 -- 70 80 90 -- 60 70 80 90 -- 50 60 70 80 90 --	Best Q^2 = .968 matrix 12.6 -- 60 -- 50 60 -- 30 50 60 -- 40 40 50 60 -- 20 30 40 50 60 --
Levels		1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6

[a]Reversals of order are underlined.

Early results using the ABS-MR are illustrated in Table 24. The ABS-MR was administered to three groups in the test development study: (a) 88 Michigan State University (MSU) graduate students (46 female, 42 male) in a course on medical information for special education or rehabilitation counselors-SER: students who were studying to be professionals in the area of disabling or handicapping conditions, (b) ED 200-633 regular education students during the 1968 winter term, and (c) 523 elementary school teachers (381 female, 142 male) in Belize. All three groups yield the simplex approximation pattern. The $\underline{Q}^2$ values for the SER sample were the same (.97) for the hypothesized order and the best order. For the ED 200 sample, the $\underline{Q}^2$ values were also the same (.94) for the hypothesized order and the best order. The $\underline{Q}^2$ values for the Belize sample were (a) hypothesized order (.858) and (b) best order (.859) Table 24). All these values exceed Hamersma's minimal criteria $\underline{Q}^2$ of .70 for a 6x6 matrix to be acceptable as a simplex.

The simplex relationship has also been obtained for other, more recent studies, using the ABS-MR (Gottlieb, 1973; Harrelson, 1970; Harrelson, Jordan, & Horn, 1972; Jordan, & Horn, 1972; Jordan, 1970, 1971b; Morin, 1969; and Vurdelja, 1970). Studies using modifications of the ABS-MR have resulted in simplex approximation. Poulos (1970) developed an Attitude Behavior Scale measuring attitudes toward the

TABLE 24.--Analysis of Simplex Correlations[a] of the ABS-MR Test Development Data for the ED 200, Belize, and SER Samples.[b]

Descriptive Term	ED 200 - 633 Sample						Belize - 523 Sample						SER - 88 Sample					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
	Original Q^2 = .95						Original Q^2 = .86						Original Q^2 = .97					
Societal Stereotype	1 --					matrix	1 --					matrix	1 --					matrix
Societal Norm	2 44	--				13.1	2 22	--				13.3	2 56	--				13.5
Personal Moral Evaluation	3 05	21	--				3 11	32	--				3 17	34	--			
Personal Hypothet. Action	4 15	21	55	--			4 21	28	39	--			4 10	12	48	--		
Personal Feeling	5 17	12	19	38	--		5 17	06	19	31	--		5 04	13	08	24	--	
Personal Action	6 01	04	05	19	22	--	6 13	10	15	32	16	--	6 01	05	04	13	21	--
	Best Q^2 = .95						Best Q^2 = .86						Best Q^2 = .97					
	1 --					matrix	1 --					matrix	1 --					matrix
Examine each matrix	2 44	--				13.2	2 22	--				13.4	2 56	--				13.6
for "order" of levels	3 05	21	--				3 11	32	--				3 17	34	--			
	4 15	21	55	--			4 21	28	39	--			4 10	12	48	--		
	5 17	12	19	38	--		5 13	10	15	32	--		5 04	13	08	24	--	
	6 01	04	05	19	22	--	6 17	06	19	31	16	--	6 01	05	04	13	21	--

[a] Reversals are underlined.

[b] See text for sample description.

From Jordan (1970, p. 26).

deaf. His data yielded a simplex for all best order $\underline{Q}^2$ groups (.83-.93) and four out of five hypothesized (original) order $\underline{Q}^2$ groups (.58-.90) (Table 25). Frechette's (1970) study of attitudes of French and English speaking Canadians toward West Indian Immigrants also yielded a simplex approximation pattern (Table 26); his hypothesized $\underline{Q}^2$ scores ranged from .54-.91, while the best order $\underline{Q}^2$ matrix values ranged from .76-.93. Williams (1970), using the ABS:BW/WN scale, found hypothesized $\underline{Q}^2$ scores (.73-.90) and best $\underline{Q}^2$ scores (.85-.95) (Table 27). As the ABS is revised, closer approximations to the 'perfect' approximation simplex should result.

A most recent development in the family of Attitude Behavior Scales has been the "drug scale" developed by Jordan, Kaple, and Nicholson (Kaple, 1971). Their simplex results have been the most successful thus far. Kaple's (1971) study used further refinements in the ABS scale. As seen in Table 28, his $\underline{Q}^2$ not only exceeded all other ABS results thus far, but approached 1.00, a theoretically perfect simplex. Guttman (1954a) defines a perfect scale (or simplex) as the following: ". . . by a perfect scale we mean a set of items such that each item separately can have its categories put into a one-to-one correspondence with intervals of the same continuum" (p. 223).

> For the case of a perfect scale of qualitative data, there is but one elementary component-the underlying rank order. From a person's scale rank, one can

TABLE 25.--Simplex Results for Research Groups on Six Levels of the ABS-DF.

Descriptive Term	TDF--Cont.						PST--Cont.						MDF--Cont.						MND--Cont.						MAN--Cont.					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1. Stereotype	--			OQ^2 = .58			--			OQ^2 = .90			--			OQ^2 = .79			--			OQ^2 = .87			--			OQ^2 = .89		
2. Normative	.57	--		Matrix 14.1			.49	--		Matrix 14.3			.53	--		Matrix 14.5			.46	--		Matrix 14.7			.51	--		Matrix 14.9		
3. Moral Eval.	.02	.12	--				.14	.31	--				.20	.09	--				.16	.11	--				.12	.44	--			
4. Hypothetical	.16	.32	.14	--			.07	.31	.74	--			-.05	-.13	.21	--			.02	.06	.38	--			.23	.51	.38	--		
5. Feeling	.07	.22	-.06	.02	--		.23	.27	.50	.44	--		.07	-.20	-.32	.06	--		.14	.14	.03	.34	--		.17	.28	.14	.26	--	
6. Action	.21	.29	.01	.41	.18	--	.01	.18	-.04	.17	.03	--	**.24**	-.07	-.08	.15	**.24**	--	.04	.10	.09	.26	.55	--	.13	.14	.13	.30	.34	--
1. Stereotype	--			BQ^2 = .84			--			BQ^2 = .93			--			BQ^2 = .83			--			BQ^2 = .87			--			BQ^2 = .89		
2. Normative	.14	--		Matrix 14.2			.23	--		Matrix 14.4			.53	--		Matrix 14.6			.46	--		Matrix 14.8			.51	--		Matrix 14.10		
3. Moral Eval.	.12	.32	--				.49	.27	--				.20	.09	--				.16	.11	--				.12	.44	--			
4. Hypothetical	.02	.16	.51	--			.14	.50	.31	--			.07	.20	.32	--			.02	.06	.38	--			.23	.51	.38	--		
5. Feeling	.01	.41	.29	.21	--		.07	.44	.31	.74	--		.24	.07	.09	.24	--		.14	.14	.03	.34	--		.17	.28	.14	.26	--	
6. Action	.06	.02	.22	.07	.18	--	**.01**	**.03**	**.18**	**.04**	.17	--	.05	**.13**	.21	.07	.15	--	.04	.10	.09	.26	.55	--	.13	.14	.13	.30	**.34**	--

	TDF--Comb.						RST--Comb.						MDF--Comb.						MND--Comb.						MAN--Comb.					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1. Stereotype	--			OQ^2 = .59			--			OQ^2 = .89			--			OQ^2 = .86			--			OQ^2 = .89			--			OQ^2 = .88		
2. Normative	.60	--		Matrix 14.11			.56	--		Matrix 14.13			.60	--		Matrix 14.15			.38	--		Matrix 14.17			.49	--		Matrix 14.19		
3. Moral Eval.	.03	.16	--				.16	.30	--				.15	.12	--				.03	.10	--				.14	.45	--			
4. Hypothetical	.15	.32	.14	--			.13	.27	.71	--			.02	.07	.33	--			.01	.05	.50	--			.22	.53	.41	--		
5. Feeling	.18	.21	.16	.09	--		.27	.32	.57	.44	--		.03	.08	.13	.23	--		.07	.22	.07	.30	--		.10	.29	.17	.34	--	
6. Action	.26	.33	.01	.46	.21	--	.07	.19	.05	.22	.13	--	.15	.11	.03	.29	.21	--	.01	.12	.25	.28	.57	--	.20	.21	.13	.34	.32	--
1. Stereotype	--			BQ^2 = .89			--			BQ^2 = .91			--			BQ^2 = .87			--			BQ^2 = .90			--			BQ^2 = .88		
2. Normative	.16	--		Matrix 14.12			.56	--		Matrix 14.14			.60	--		Matrix 14.16			.38	--		Matrix 14.18			.49	--		Matrix 14.20		
3. Moral Eval.	.15	.21	--				.27	.32	--				.15	.12	--				.03	.10	--				.14	.45	--			
4. Hypothetical	.03	.18	.60	--			.16	.30	.57	--			.15	.11	.03	--			.07	.22	.07	--			.22	.53	.41	--		
5. Feeling	.14	.09	.32	.15	--		.13	.27	.44	.71	--		.02	.07	.33	.29	--		.01	.12	.25	.57	--		.20	.21	.13	.34	--	
6. Action	.01	.21	.33	.26	.46	--	.07	.19	.13	.05	.22	--	**.03**	**.08**	.13	.22	.23	--	.01	.05	.50	.30	.28	--	.10	.29	.17	.34	.32	--

Note: From Paulos (1970, pp. 134-135).

TABLE 26.—Analysis of Simplex Correlations[a] of the ABS- BW/WN-G for the Samples.[b]

		EC - 99 Sample[c]						RST-S 20 Sample[d]						IO - 23 Sample[e]						IM - 22 Sample[f]					
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
		Original Q^2 = .91						Original Q^2 = .65						Original Q^2 = .76						Original Q^2 = .54					
Societal Stereotype	1	--				matrix 15.1		--				matrix 15.3		--				matrix 15.5		--				matrix 15.7	
Societal Norm	2	23	--					17	--					27	--					01	--				
Personal Moral Evaluation	3	-2	41	--				24	37	--				06	39	--				01	25	--			
Personal Hypothetical Action	4	15	39	57	--			07	18	60	--			07	23	72	--			26	13	63	--		
Personal Feeling	5	01	35	38	43	--		41	34	34	19	--		03	31	61	61	--		21	13	20	33	--	
Personal Action	6	05	12	17	20	26	--	31	57	30	13	32	--	33	06	01	27	33	--	30	22	05	04	28	--
		Best Q^2 = .92						Best Q^2 = .93						Best Q^2 = .76						Best Q^2 = .85					
Societal Stereotype	1	--				matrix 15.2		--				matrix 15.4		--				matrix 15.6		--				matrix 15.8	
Societal Norm	2	23	--					41	--					27	--					30	--				
Personal Moral Evaluation	3	15	39	--				31	32	--				06	39	--				21	28	--			
Personal Hypothetical Action	4	02	41	57	--			17	34	57	--			07	23	72	--			26	04	33	--		
Personal Feeling	5	01	35	43	38	--		24	34	30	37	--		03	31	61	61	--		01	22	14	13	--	
Personal Action	6	05	12	20	17	26	--	07	19	13	18	60	--	33	06	01	27	33	--	01	05	20	63	25	--

[a] Reversals are underlined.

[b] See text for sample description.

[c] Critical value of r at .05 level = .19

[d] Critical value of r at .05 level = .42

[e] Critical value of r at .05 level = .38

[f] Critical value of r at .05 level = .39.

From Frechette (1970, p.72).

TABLE 27.--Analysis of Simplex Correlations of the ABS:BW/WN for the Research Groups.

	BP						WP						BC						WC					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
	Original Q^2=.74						Original Q^2=.90						Original Q^2=.73						Original Q^2=.83					
1	--						--						--						--					
2	13	--					41	--					59	--					58	--				
3	29	38	--				17	35	--				27	22	--				32	29	--			
4	14	30	46	--			19	33	46	--			17	35	03	--			08	18	22	--		
5	01	14	08	04	--		08	09	36	22	--		29	55	20	55	--		26	11	07	30	--	
6	14	25	44	14	07	--	10	13	13	04	29	--	22	17	01	30	39	--	04	37	27	30	22	--
	Matrix 16.1						Matrix 16.3						Matrix 16.5						Matrix 16.7					
	Best Q^2=.92						Best Q^2=.92						Best Q^2=.95						Best Q^2=.85					
1	--						--						--						--					
2	14	--					41	--					27	--					58	--				
3	29	46	--				19	33	--				22	59	--				32	29	--			
4	14	14	44	--			17	35	46	--			20	29	55	--			04	37	27	--		
5	12	30	38	25	--		08	09	22	36	--		03	17	35	55	--		08	18	22	30	--	
6	01	04	08	07	14	--	10	13	04	18	29	--	01	22	17	39	30	--	26	11	07	22	30	--
	Matrix 16.2						Matrix 16.4						Matrix 16.6						Matrix 16.8					

Note: From Williams (1970, p. 69).

TABLE 28.--Correlation Matrices and $\underline{Q}^2$ Values for Original and Best Simplex Approximations on the ABS-DU, All Categories, Initial Scale.[a]

Original Simplex Matrix Total All Categories All Groups

--				$\underline{Q}^2$ = .98	
.55	--			matrix 17.1	
.39	.27	--			
.27	.25	.70	--		
.24	.24	.62	.86	--	
.21	.24	.59	.82	.88	--

Best Simplex Matrix Total All Categories All Groups

--				$\underline{Q}^2$ = .98	
.55	--				
.39	.37	--		matrix 17.2	
.27	.25	.70	--		
.24	.24	.62	.86	--	
.21	.24	.59	.82	.88	--

[a]From Kaple (1971, p. 102).

> deduce his behavior on each and every item in the universe of content being studied. Thus, a single variable-the scale ranks-(or their transformation into any other metric)-accounts for the totality of behavior, and in particular for the inter-relationships between the items (Guttman, 1954b, p. 259).

Kaple's (1971) data resulted in a $\underline{Q}^2$ of .98; only one group failed to exceed the .70 minimal requirement postulated by Hamersma (1969) for an acceptable simplex approximation. A set of tests whose observed intercorrelations form a perfect simplex have a simple order of complexity (Guttman, 1954b, p. 271).

It can be concluded that Kaple's modification of Jordan's Attitude Behavior Scale, to test attitudes towards drug use (ABS-DU), does indeed order attitude-behavior along the six-Level continuum derived by Jordan, according to a simple order of complexity. Kaple does not explain his one 'reversal,' except to point out that the particular group had an extremely low rate in questionnaire return. He offers an explanation for his extremely good results ($\underline{Q}^2$ = .98, the highest $\underline{Q}^2$ thus far obtained in the development and modifidation of the ABS scales): "the directions and item stems for Levels 3 and 6 were changed slightly from previous ABS scales and the consistently high $\underline{Q}^2$ obtained may partially reflect the new semantics employed at these levels." Kaple recommends that additional experimentation and research is needed to further evaluate the effect of slight differences in semantic structure (Kaple, 1971, p. 135).

Thus, the totality of attitude-behavior encompassing the realm of attitudes and behavior as defined along McGuire's (1969) entire cognitive-affective-conative dimension and ordering of this attitude-behavior from least complex (cognitive) to most complex (conative), in the area of attitudes toward drug users, has been analyzed according to Guttman's 1959 facet design. The goal of this entire research venture, begun ten years ago by Jordan at Michigan State University, that of defining and facetizing attitude-behavior as a necessary first step to producing means and methods to effectively change attitude-behavior, has resulted in the attainment of a "near-perfect" simplex.

Reliability and Validity of the ABS Scales

Standard reliability procedures were applied to the Attitude Behavior Scales since they were new scales. The following section reports reliability and validity information for both the original Mental Retardation (MR) scale and the Racial Attitude (BW-WN) scale, a more recent scale based on the Mental Retardation scale. An item analysis was run on the ABS inter-item correlation patterns and item-to-subscale correlations. The reliability coefficient correlation for the ABS-MR and the ABS-BW/WN ranged between .70 and .95 (Jordan, 1971a; Morin, 1969). The method used for reliability was the Hoyt (1967) method which produces a coefficient similar to the Kuder-Richardson 20 measure of internal consistency. The reliability coefficients found in

the studies compare favorably to those of many tests described by Anastasi (1968) and with the bulk of other attitude scales described by Shaw and Wright (1967).

"The content validity of the ABS-MR may be assumed since the content of the items was evolved in cooperation with practicing school psychologists in the field of mental retardation and 'known' groups were used to assess predictive ability" (Jordan, 1971a, p. 20). Facet theory guided the selection of items and thus helped insure that the item universe was sampled (Jordan, 1970, p. 33). Construction of the attitude behavior scales in general, was based on facet theory, and construction of the items followed a systematic a priori method instead of by the method of intuition or by the use of judges. Every item on every Level of a form of the ABS corresponds to a combination of elements of each and every facet.

Anastasi (1968) states that "content validity involves essentially the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured" (p. 100). For content validity to exist, it must be encompassed into the test while it is being developed. Anastasi suggests a thorough and systematic examination of relevant subjective material, as well as consultation with experts knowledgable in the specific area. These suggestions were included in the development and writing of the ABS-BW/WN. The items

were taken from a diverse compilation of resources in the areas of racial attitudes and race relations. Subject material, such as the Report of the National Advisory Commission on Civil Disorders, was utilized, as well as additional research (Brink and Harris, 1964; Brink and Harris, 1967, Shaw and Wright, 1967; CBS News, 1968; and Maccoby and Funkhouser, 1968) in the area of racial attitudes and racial discontent. Suggestions from personnel of the Urban Adult Education Institute and the Foundation for Racial Equality: In Memory of Martin Luther King, Jr. in Detroit were also used in constructing the scales.

Systematic analysis of all major aspects considered by the test items is necessary for proper content sampling (Anastasi, 1968). In the ABS-BW/WN attitudes were measured in seven separate content areas, plus an additional general area; these areas were based on the above sources of information. The items in each of these seven areas followed Guttman structure and were placed on Jordan's five-facet, six-Level continuum, thus insuring known sampling of profiles of the item universe.

Jordan (1970) indicates adequate similarity between most of the three sets (i.e., the three samples) of correlations for the ABS-MR test development data. An analysis of results of the six ABS-MR Levels yields additional support for construct validity, since the postulated semantic structure (cognitive, affective, conative) and obtained

statistical structure (i.e., the simplex) are in essential agreement. "The scale level 'ordering' of 1<2<3>4>5>6 in several nations is further evidence of construct validity and cross-cultural invariance" (p. 33). Jordan (1971a), Morin (1969) and Vurdelja (1970) using the ABS-MR obtained the simplex ordering predicted by Guttman's contiguity hypothesis in 19 out of 25 groups tested.

Concurrent validity of the ABS-MR may be inferred from the fact that the older, more experienced, and knowledgable samples also scored more positively toward the mentally retarded. Data were gathered for the samples on twenty-two predictor variables which offered considerable 'correlational' evidence of the validity of the ABS-MR content, in that groups with known characteristics responded as expected (Gottlieb, 1973; Harrelson, 1970; Harrelson, Jordan, and Horn, 1972; Morin, 1969; and Vurdelja, 1970). Jordan (1972b) reports evidence for concurrent validity in that three ABS-MR studies (Jordan, 1971a; Morin, 1969; Vurdelja, 1970) have differentiated groups with known diverse characteristics in several languages.

Evidence for construct validity is seen in analysis of the simplex approximation data. The semantic structure and the obtained statistical structure are in agreement. The simplex results shown in Tables 23 and 24 show the close approximation to the simplex that was obtained with the early ABS-MR scales. Also, other studies using the

ABS-MR (Gottlieb, 1973; Harrelson, 1970; Harrelson, Jordan, and Horn, 1972; Jordan, 1970, 1971a, 1971b; Morin, 1969; and Vurdelja, 1970) have obtained results that fit the simplex pattern. Studies (Frechette, 1970; Poulos, 1970; Williams, 1970) using modifications of the ABS-MR scale applied to other attitude objects have also resulted in simplex approximations (Tables 25, 26 and 27). Kaple's (1971) data yield an even closer approximation to the 'perfect' simplex pattern, illustrating that modifications of the original ABS-MR scale applied to other groups can lend support to construct validity.

CHAPTER VI

DESIGN

> Those who live in a cold climate and in Europe are full of spirit, but wanting in intelligence and skill. [They] keep their freedom but have no political organization, and are incapable of ruling over others (Aristotle, Politics, cited in Kovel, 1970, p. 13).

Instrumentation

The design for this dissertation is based on Jordan's extensive research at Michigan State University described in detail in Chapter V. Jordan expanded and refined Guttman's four-Level facet design into a six-Level design, maintaining the Guttman simplex approximation pattern.

Procedure

The Attitude Behavior Scales: Whites toward Blacks/Negroes (ABS-W/B-N) were administered to 254 white Michigan State University students enrolled in Education 450 during the Winter Term of 1972. These students were all education majors who had just completed student teaching and had returned to Michigan State University to take this course to complete their program for certification as teachers. The two Attitude Behavior Scales (Appendix B) that were administered to this group differed only in the subject-object

referent. One-half of the group received scales with the term 'Negro' in them; the other half received scales with the term 'black' substituted for 'Negro.' The two scales were indexed so that every other scale was an "ABS toward blacks" or an "ABS toward Negroes." Both scales were similar in all other respects.

For both ease of sampling and application of the scales later in the course for instructional purposes, black and other non-white students were also given the scale. Black students were given the Attitude Behavior Scale that assessed black attitudes toward white people. As this study is concerned only with white attitudes toward black people, the non-white scale results were not included in the data. However, the black students taking the Attitude Behavior Scale Spring Term were given their own results along with the white students in the class. All data were anonymous as only the individual student knew his subject number.

The data from this study were used for instructional purposes in two three-week sections of Education 450 offered Spring Term at Michigan State University. These two sections were two of 74 'modules' offered to students enrolled in the course. Of the 74 sections offered, students could choose the section they desired. Students voluntarily chose the "Attitudes Toward Minority Groups" section. The Attitude Behavior Scales were used as an introduction to

material on "Attitudes Toward Minority Groups," the title for these two sections.

The two forms ('black' and 'Negro') of the racial Attitude Behavior Scale were administered to these sections of Education 450 Spring Term (22 white students present in the morning section and 25 white students in the afternoon section when the scales were administered). To aid in discovering affective relevance of the terms 'black' and 'Negro,' a Semantic Differential was also administered to the two groups along with the ABS. The Semantic Differential evaluated five words: 'friend,' 'enemy,' 'black person,' 'white person,' and 'Negro person' on a series of twenty word differentials. The concepts 'black person' and 'Negro person' were randomized, each concept appearing before the other one-half the time. These concepts were rated in three areas on 20 scales: 'evaluation' (10 terms), 'potency' (5 terms), and 'activity' (5 terms), in accordance with previous studies conducted in the area of race and the Semantic Differential (Osgood, Suci, and Tannenbaum, 1957; Williams, 1964, 1966; Lessing and Zagorin, 1972). The words included for each concept were the following: kind-cruel, clean-dirty, bad-good, honest-dishonest, unpleasant-pleasant, worthless-valuable, fair-unfair, cowardly-brave, friendly-unfriendly, unsuccessful-successful, (evaluation); thick-thin, strong-weak, small-large, soft-hard, heavy-light (potency); and cold-hot, active-passive, slow-fast,

sharp-dull, violent-moderate (activity). The Semantic Differential scales (Appendix C) were given after the ABS was completed.

An analysis was performed comparing the results of the three scales of the Semantic Differential ('evaluation,' 'potency,' and 'activity') with the results of the Attitude Behavior Scale for the Spring Term Education 450 samples. The 'evaluation,' 'potency,' and 'activity' scales of the Semantic Differential were correlated with each of the six separate ABS Levels (Societal Stereotype, Societal Norm, Personal Moral Evaluation, Personal Hypothetical Action, Personal Feeling, Personal Action). The aim of this particular group of comparisons was to see if the E ('evaluation'), P ('potency'), and A ('activity') dimensions of the Semantic Differential related to the six Levels of the ABS. Researchers (Osgood, Suci, and Tannenbaum, 1957; Williams, 1969) feel that the E factor is a measure of attitude. Jordan's work (1971a, 1971b, 1972a) involves an attempt to analyze attitude into six Levels. The present analysis seeks to find out whether the E factor of the Semantic Differential measures an aspect of attitude similar to that on several Levels of Jordan's attitude-behavior scales. It is an attempt to discover if high scorers on the E factor also score high on the feeling and action Levels (Levels 4-6) of the ABS. According to Osgood, Suci, and Tannenbaum (1957), there is a weaker relationship for the

A and P factors in regard to attitude than there is for E. The present analysis compares these factors with the six ABS Levels to find out the relationship of each of the three Semantic Differential scales with the six ABS Levels.

Efficacy, in this study, was measured by a five-question 'efficacy' scale used by Hamersma (1969). The scale was derived from research conducted by Wolf (1967). Efficacy, as used by Hamersma, "purports to measure attitudes toward man's effectiveness in the face of his natural environment" (p. 98). Some of the research behind the variable of efficacy includes a discussion by Katz and Gurin (1969). They state that efficacy is the one characteristic that "most clearly differentiates both children and adults of two races" (p. 364). Further, they feel it is closely related to achievement. Rotter (cited in Katz and Gurin, 1969) calls this variable 'fate control.' "Individuals vary in the extent to which they feel they can extract material and social benefits from the environment through their own efforts. In its broadest meaning, the construct refers to one's sense of efficacy, or power, and readiness to accept personal responsibility for what happens to him" (Rotter, cited in Katz and Gurin, p. 364).

Rotter, Seeman, and Liverant (1962) discussed broad implications of individuals who score high or low on a measure of internal versus external control of reinforcement. They hypothesized that individuals who have a high

belief in external control of reinforcement (i.e., these individuals would supposedly score low on 'efficacy') would be more passive than those having a low belief in external control. People who felt in control of their surrounding environment, would more likely tend to actively change their position in relation to their environment. Rotter et. al. hypothesized that individuals who are in the middle range of the variable would be likely to increase their own personal satisfactions by understanding the environment, even though they would feel they could not change the environment much. These people adjust by learning "the rules of the game" and although quite conforming, gain maximum satisfaction through their conformity.

> People with perhaps a still greater belief in internal control may include those who believe in their own potential to change the environment or the world around them. They are not merely ambitious but could be creative, non-conformists, or revolutionary. Their revolutionary goals might be in the political realm of ideas or the arts. Not all people at the extreme of internal control could be so characterized because many of them might be highly rigid, moralistic, or immobilized by feelings of failure. However, it is quite possible that the real innovators could be drawn from that population which is relatively high in a generalized belief in internal control of reinforcement (Rotter, Seeman, and Liverant, 1962, p. 476).

Rotter (1966) distinguished between a belief in internal control and external control. An individual who believes in a high degree of internal control (high efficacy score) is one who feels that his own behavior and characteristics can determine events that happen to him. A person with a belief in external control, feels more at the mercy of his

environment. He believes that forces around him are not entirely at his control; circumstances are considered more unpredictable and fate or luck is given as a rationale for much that occurs to him. He perceives the world as more complex and therefore difficult to change, effect, or modify. Hypothetically, a person who believes in external control would score low on the efficacy variable. Four studies reported by Rotter confirm this analysis of internal and external control of one's environment. The importance of this variable of efficacy to racial attitudes and attitude change has been summarized by Rotter (1966, p. 24) as follows:

> The individual who perceives that he does not have control over what happens to him may conform or may go along with suggestions when he chooses to and when he is given a conscious alternative. However, if such suggestion or attempts at manipulation are not to his benefit or if he perceives them as subtle attempts to influence him without his awareness, he reacts resistively. The findings have considerable significance for the general area of persuasion and propaganda.

Research Hypotheses

H-1: Whites taking the "ABS toward blacks" will have significantly more negative attitudes than whites taking the "ABS toward Negroes."

Rationale--Williams (1966) found that whites evaluated 'black person' more unfavorably than they rated 'Negro person' on a Semantic Differential.

Lessing and Zagorin (1972) found that whites who scored low on a measure of "black power orientation" rated

the two concepts, 'black person' and 'Negro person,' differently, rating 'black person' lower, but not significantly lower, than 'Negro person.' Whites high in "black power orientation" rated the two concepts about equally, rating 'black person,' however, slightly higher than 'Negro person.' The researchers concluded there was no longer any difference between the two terms.

The present author felt that white college students in Education at Michigan State University come from fairly conservative backgrounds and will evaluate 'Negro person' more positively than 'black person,' primarily because the concept 'black person' will elicit connotations of black militancy and will hence be more threatening than the concept 'Negro person.'

Instrumentation--There were two forms of the ABS, "ABS toward blacks" and "ABS toward Negroes."

Analysis--Multivariate analysis of variance (MANOVA).

H-2: The attitude data from the sample will form a Guttman simplex.

Rationale--According to Guttman's (1959) Contiguity Hypothesis, Levels that are closer together semantically will be closer statistically. The Level-by-Level correlation matrix will approximate a simplex, unless the items were incorrectly written or inaccurately assigned to Levels.

Instrumentation--Correlations between the scores of the six Levels of the ABS-WB/WN-G.

Analysis--Kaiser Q^2

H-3: There is a positive relationship between a high efficacy score and positive attitudes on the ABS.

Rationale--A high score on this variable indicates a person who feels in control of his environment and, therefore, less threatened by it. It is postulated that high scorers will have more positive racial attitudes.

Hamersma (1969) found a positive relationship between scores on the efficacy variable and favorable attitudes toward the opposite racial group. Dell Orto (1970) found a significant relationship for whites between efficacy and positive attitudes at Level 4 (Personal Hypothetical Action) and Level 5 (Personal Action) of the ABS: BW/WN-G. Allport and Kramer (1946, cited in Dell Orto, 1970) found that "those who were non-efficacious had a jungle philosophy of life--viewing the world as basically evil and dangerous--and were generally prejudiced" (p. 20).

The efficacy scale "was designed to measure attitudes toward man and his environment and attempts to determine the respondent's view of the relationship between man and his environment" (Hamersma, 1969, p. 98). The usage and function of this scale was outlined by Wolf (1967, p. 113):

> 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.

Hamersma (1969, p. 98) termed this variable 'efficacy' because it "purports to measure attitudes toward man's effectiveness in the face of his natural environment."

The efficacy scale was one of five attitude scales constructed by Wolf (1967). This particular scale involved testing students' views concerning man and his surrounding, external environment. The scale attempts to measure a continuum of man's attitudes, ranging from viewing man as at the complete mercy of his own environment, only able to obtain some minimal measure of control through science over the forces that surround him, "to a view that man could gain complete mastery of his physical and social environment and use it for his own purposes" (p. 113).

The five scales went through several stages of development before they were field tested on persons in seven countries, including the United States. In each country, 150 students from each of several age levels were involved in the testing. The scales were then subjected to Guttman unidimensional scale analysis, at which time the items were again evaluated, modified, and refined. According to Wolf (1967, p. 118), "the coefficients of reproducibility for the final scales generally ranged above the .80 to .85 considered acceptable by other researchers."

Instrumentation--The Life Situations Scale by Wolf (1967, p. 122) involving nine items. The nine items on the Attitude Behavior Scale attempting to measure efficacy include items 101-109.

Analysis--Correlation coefficients.

H-4: Subjects taking the Semantic Differential will give the concept 'Negro person' a significantly higher rating on the 'evaluation' dimension than the concept 'black person.'

Rationale--See H-1, above.

Instrumentation--Semantic Differential scores on the 'evaluation' dimension.

Analysis--Two-sample t-test

H-5: Subjects taking the Semantic Differential will give the concept 'black person' a significantly higher rating on the 'potency' dimension of the Semantic Differential than the concept 'Negro person.'

Rationale--Lessing and Zagorin (1972, p. 70) found consistent results regarding the 'potency' and the 'activity' factors of the Semantic Differential evaluated by both black and white students:

> Blacks were seen as the strongest, most potent and most active. Negroes were viewed as slightly less strong and active, whites as still less strong and active, with colored persons being viewed as the weakest and most passive. Though the word "Negro" was once held to have the meaning of "slave" by a pre-Civil War court (Isaacs, 1963, p. 65), the contention of Baird (cited in Bennett, 1967, p. 52) that "Negro" evokes a slave image in the minds of twentieth century Americans is questionable on the basis of the present findings: Negro person was perceived as no weaker than white person. Clearly, however, the designation "black person" was the most evocative of the powerful image which black power advocates desire for Afro-Americans.

Instrumentation--Correlations between 'black person' and 'Negro person' on the 'potency' dimension of the Semantic Differential.

Analysis--Two-sample t-test.

H-6: Subjects taking the Semantic Differential will give the concept 'black person' a significantly higher rating on the 'activity' dimension of the Semantic Differential than the concept 'Negro person.'

Rationale--See H-5, above.

Instrumentation--Ratings of 'black person' and 'Negro person' on the 'activity' dimension of the Semantic Differential.

Analysis--Two-sample t-test.

H-7: A higher efficacy score on the ABS will be correlated with more positive scores on the 'evaluation' dimension of the Semantic Differential for the concepts 'friend,' 'black person,' 'white person,' 'Negro person,' and more negative scores for the concept 'enemy.'

Rationale--Those persons who feel in control of the environment (score high on the efficacy scale) should have a clearer and more positive conception of what 'friend' means to them. They will have more positive attitudes toward both their own group ('white persons') and other groups ('black persons,' 'Negro persons'). It is also believed that they will differentiate between groups they accept and like and groups they do not, hence giving a more negative response to the concept 'enemy.'

Instrumentation--Correlations between efficacy scores on the ABS and scores on the concepts 'friend,'

'black person,' 'white person,' 'Negro person,' and 'enemy' on the 'evaluation' dimension of the Semantic Differential.

Analysis--Correlation coefficients.

H-8: There will be a positive relationship between high scores on the 'evaluation' dimension of the concept 'black person' and 'Negro person' of the Semantic Differential and positive scores on the ABS.

Rationale--Osgood, Suci, and Tannenbaum (1957) define attitude as predispositions to respond distinguishable from other states of readiness in that they predispose toward an evaluative response. "Score variation along the E dimension covaries closely with the score variation on conventional attitude tests" (p. 193). They further state that studies completed using Thurstone and Guttman scales lend additional support to the notion that the E dimension of the Semantic Differential can be considered a measure of attitude.

Fishbein (1965) stated that Osgood equated the 'evaluative' dimension with attitude, a concept's favorableness or unfavorableness, goodness or badness. Fishbein stated that Osgood defined attitude as a "predisposition to respond;" this appears contrary to Jordan's (1971a) definition of "attitude as behavior;" however, Osgood's definition is similar to what Jordan is attempting to measure and according to Fishbein, can be divided into six categories, including cognitive, affective, and behavioral intentions or action components. These six categories were as follows:

1. Beliefs about the component parts of the object;
2. Beliefs about the characteristics, qualities, or attributes of the object;
3. Beliefs about the objects relations with other objects or concepts;
4. Beliefs about whether the object will lead to or block the attainment of various goals or "valued states;"
5. Beliefs about what should be done with respect to the object;
6. Beliefs about what the object should, or should not, be allowed to do (Fishbein, 1965, pp. 110-111).

Osgood, Suci, and Tannenbaum (1957, p. 190) stated the following in regard to attitude and the 'evaluative' dimension of the Semantic Differential. "It seems reasonable to identify attitude, as it is ordinarily conceived in both lay and scientific language, with the evaluative dimension of the total semantic space, as this is isolated in the factorization of meaningful judgments." They did go on to suggest that other dimensions combined with E can improve prediction of attitudes, but build the strongest case for the 'evaluative' factor, and secondarily for the 'potency' and 'activity' factors.

"The evaluative meanings of both the skin color, per se, and the color code term appear to be significantly related to attitudes toward this group of persons . . . the designation of racial groups by color names is one determinant of racial attitudes" (Williams, 1969, p. 385).

The ABS is an attempt to measure "attitude-behaviors" along a cognitive-affective-conative analysis. This is consistent with McGuire's (1969) analysis of attitude into

knowing, feeling, and acting. Jordan uses Guttman's definition of attitude as "a delimited totality of behavior with respect to something" (1950b, p. 51). According to Jordan (1971a), this definition of Guttman's "is consonant with a structural (Foa, 1966, 1968; Foa and Turner, 1970) approach to the facet analysis of attitude-behavior" (Jordan, 1971a, p. 7). Jordan and his associates at Michigan State University have conducted several studies (Bray, 1972, 1973; Dell Orto, 1970; Frechette, 1970; Williams, 1970) indicating that the ABS/BW-WN is a measure of racial-ethnic attitudes.

The 'evaluation' factor of the Semantic Differential purports to be a measure of attitude along the cognitive-affective-conative analysis; the ABS also represents a measure of attitude along the same trichotomy of attitude. It is hypothesized that since these two scales propose to measure the same thing, there should be a positive relationship between scores on one and scores on the other, if indeed they are both a measure of thinking, feeling, and acting (i.e., 'attitude').

Instrumentation--Correlations between the ABS and the 'evaluation' dimension of the Semantic Differential.

Analysis--Correlation coefficients.

H-9: There will be no significant correlations between high scores on the 'potency' dimension of the concepts 'black person' and 'Negro person' of the Semantic Differential and positive attitudes on the ABS.

Rationale--Studies (Osgood, Suci, and Tannenbaum, 1957; Williams, 1969, 1971) have shown that a high score on the 'evaluation' factor is a measure of positive attitudes whereas results concerning high scores on the 'potency' and the 'activity' dimensions are equivocal. Osgood, Suci, and Tannenbaum (1957) specifically defined attitude as "a learned implicit process which is potentially bipolar, varies in its intensity, and mediates evaluative behavior" (p. 190).

Williams et al., (1971, p. 222) stated that past research has shown that the color name white has been rated as good, weak, and active, while the color name black has been rated as bad, strong, and passive. Research is conflicting with regard to 'potency' and 'activity.' Williams (1966) found the most consistent data with the E dimension; he also found it for P and A, but not as strong nor as consistent.

Instrumentation--Correlations between scores on the ABS and scores on the 'potency' factor of the Semantic Differential.

Analysis--Correlation coefficients.

H-10: There will be no significant correlations between high scores on the 'activity' dimension of the concepts 'black person' and 'Negro person' of the Semantic Differential and positive attitudes on the ABS.

Instrumentation--Correlations between scores on the ABS and scores on the 'activity' dimension of the Semantic Differential.

Analysis--Correlation coefficients.

CHAPTER VII

ANALYSIS OF THE DATA

> The one thing to keep uppermost in our minds is that whatever is good for the black community will enhance the white community because these communities have always been and always will be inseparable even within their separateness (Sikes, 1971, p. 104).

This study investigated several hypotheses concerned with two forms of the racial Attitude Behavior Scale--ABS/WB-WN, and a form of the Semantic Differential. Two forms of the ABS were used, testing white "attitudes toward blacks" and white "attitudes toward Negroes." The Semantic Differential was used to investigate white students' attitude meanings toward the concepts 'friend,' 'enemy,' 'black,' 'white,' and 'Negro' on the three dimensions of 'evaluation,' 'potency,' and 'activity.' The two scales, ABS and Semantic Differential, were compared to one another.

Analysis Procedure

The data were analyzed on the CDC 3600 and CDC 6500 at the Michigan State University Computer Center. Table 29 contains the basic variables list used in this study.

TABLE 29.--ABS-BW/WN/WB: Basic Variables[a] List by IBM Card and Column. Brodwin Study (U.S. = 133).

Variable			Range	IBM		ABS-BW/WN/WB	
				Card	Column	Page	Item
Attitude	1.	Stereotype	14-42	1	21-34	1-2	1-14
	2.	Normative	14-42	2	21-34	3-4	15-28
	3.	Moral eval.	14-42	3	21-34	5-6	29-42
	4.	Hypothetical	14-42	4	21-34	7-8	43-56
	5.	Feeling	14-42	5	21-34	9-10	57-70
	6.	Action	14-42	6	21-34	11-12	71-84
Demo.	7.	Sex[b]	1-2	1-6	36	13	85
	8.	Age	1-5	1-6	37	13	86
	9.	Marital	1-5	1-6	38	13	87
	10.	Religion	1-5	1-6	39	14	88
	11.	Educ. -amt.	1-5	1-6	40	14	89
Change	12.	Child rearing	1-4	1-6	41	14	90
	13.	Birth control	1-4	1-6	42	14	91
Contact	14.	Kind	1-3	1-6	43	15	92
	15.	Amount	1-5	1-6	44	15	93
	16.	Avoid	1-5	1-6	45	15	94
	17.	Gain	1-5	1-6	46	15	95
	18.	Enjoy	1-5	1-6	47	16	96
Race	19.	Prejudice-reduce	1-5	1-6	48	16	97
	20.	Racial attitude	1-5	1-6	49	16	98
	21.	Ethnicity	1-5	1-6	50	16	99
	22.	Urbanity	1-4	1-6	51	17	100
Value	23.	Efficacy	9-36	1-6	52-60	18-19	101-109
Sem. Diff.	24.	Friend[e]	7	7	19-38		
	25.	Enemy	7	7	40-59		
	26.	Black	7	7	61-80		
	27.	White	8	8	19-38		
	28.	Negro	8	8	40-59		
Identity	29.	Nation (133)	001-999	1-6	1-3	--	--
	30.	Group-interest	01-99	1-6	4-5	--	--
	31.	Group-admin.[c]	01-99	1-6	6-7	--	--
	32.	Subject no.	001-999	1-6	8-10	--	--
	33.	Card no.	1-6	1-6	11	--	--
	34.	Attitude object[d]	1-6	1-6	12	--	--

[a] On the 112271 edition of the ABS-WB/BW

[b] Female = 1, male = 2.

[c] Admin. group
1=8:00 a.m.--Spring, 1972
2=12:00 noon--Spring, 1972
3=Winter term, 1972

[d] Attitude object (col. 12)--
1 = black; 2 = Negro.

[e] Each "concept" has 20 bipolar terms as follows:
Evaluation--19,21,23,25,27,29,31,33, 35,37
Potency--20,24,28,32,36
Activity--22,26,30,34,38.

Descriptive Statistics

Two Frequency Column Count Programs (Clark, 1964) were used to compile the frequency distributions for every item in the instruments used in this study. This procedure was useful to insure proper and accurate representation of the data in the computer prior to running it in computational programs.

Statistical Analysis

In the CDC STATROUT Program (Ruble, Paulson, & 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, "ABS toward blacks," "ABS toward Negroes," etc., a number of statistics can be requested. Those used for each partitioning in this research were the means and standard deviations for each variable and the matrix of simple correlations between all variables.

Two sample t-tests for dependent samples were used in the analysis as well as the Finn Program (Finn, 1970) for multivariate analysis of variance (MANOVA).

Simplex Approximation

Kaiser (1962) has suggested a procedure for testing for a simplex approximation. Kaiser's approach may be seen as performing two functions: (a) the 'sorting' and

rearranging of all possible arrangements of adjacent pairs, and (b) the assignment of a statistic, $\underline{Q}^2$ to the original and rearranged matrices. The index $\underline{Q}^2$ is a descriptive one, with a range of 0.00 to 1.00.

A computer program has been developed at Michigan State University which will (a) reorder the obtained level member correlations of each ABS: WB-WN matrix by Kaiser's[1] procedure to generate the 'best' empirically possible simplex approximation, and (b) will calculate the $\underline{Q}^2$ for both the obtained and the empirically best ordering of each matrix.

Significance Level

The .05 level is proposed as constituting significance beyond chance for correlational coefficients, multivariate analysis of variance, and two-sample t-tests in the present research.

Research Hypotheses

H-1: Whites taking the "ABS toward blacks" will have significantly more negative attitudes than whites taking the "ABS toward Negroes."

The results of the present study, using subjects taking the two forms of the ABS, 'black' and 'Negro,' found

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[1]As documented elsewhere by Jordan (Harrelson, Jordan, & Horn, 1972). Guttman has pointed out that the Kaiser procedure is limited to a simplex of the form $r_{jk} = aj/ak$ $(j<k)$ and alternate methods of simplex analysis are being explored by Jordan and Guttman.

no significant differences in attitudes between the two terms. Also, no differences were found among the six Levels of the ABS and the three groups (one, Winter Term; two, morning and afternoon sections, Spring Term) that had taken the attitude scales; the results were reported both simultaneously and separately for the six Levels. A multivariate analysis of variance (MANOVA) was used to test these results. Tables 30 and 31 contain the results for the two racial terms and the three Administration Groups, respectively.

H-2: The attitude data from the samples will form a Guttman simplex.

The simplex approximation hypothesis was tested by use of the CDC STATROUT computer program at the Michigan State University Computer Center to produce Level to Level correlations for all groups and categories. The Level to Level correlations were then subjected to Kaiser's (1962) simplex approximation test described in Chapter V. The obtained matrix was submitted to a procedure that 'evaluates' the obtained correlation matrix, resulting in a $\underline{Q}^2$ value. The program also rearranges adjacent pairs of coefficients into the best possible simplex order and computes a 'best approximation' $\underline{Q}^2$. Table 32 illustrates the simplex approximation $\underline{Q}^2$ values for the three groups. For Groups 1 and 2, the $\underline{Q}^2$ tables represent a combination of the two forms of the ABS; this procedure was taken because of the smaller samples for Groups 1 and 2. Since Group 3 was a

TABLE 30.--Multivariate Analysis of Variance (MANOVA) Results for Racial Terms, 'Black' and 'Negro'

Variable	Between Mean Sq.	Univariate F	P Less Than
Stereotypic	8.78	0.66	0.42
Normative	19.18	0.76	0.38
Moral Evaluation	10.98	0.21	0.64
Hypothetical Action	6.08	0.16	0.69
Personal Feeling	15.18	0.49	0.48
Actual Action	76.64	0.83	0.36

Note: Degrees of Freedom for Hypothesis = 1. Degrees of Freedom for Error = 296. F--Ratio for Multivariate Test of Equality of Mean Vectors = 0.7556. D. F. = 6 and 291. P Less Than 0.6055

TABLE 31.--Multivariate Analysis of Variance (MANOVA) Results for the Three Administration Groups

Variable	Between Mean Sq.	Univariate F	P Less Than
Stereotypic	16.07	1.22	0.30
Normative	9.58	0.38	0.68
Moral Evaluation	114.58	2.23	0.11
Hypothetical Action	85.93	2.22	0.11
Personal Feeling	17.50	0.57	0.57
Actual Action	311.79	3.36	0.04

Note: Degrees of Freedom for Hypothesis = 2. Degrees of Freedom for Error = 2.96. F--Ratio for Multivariate Test of Equality of Mean Vectors = 1.2938. D. F. = 12 and 582. P Less Than 0.2176.

TABLE 32.--Correlation Matrices and Q^2 Values for Original and Best Simplex Approximations.

Original Simplex Matrix, Group 1

--				Q^2 = .86	
.29	--				
.06	.50	--			
.12	.11	.46	--		
.16	.06	.39	.42	--	
.05	.47	.15	.23	.22	--

Improved Simplex Matrix, Group 1

--				Q^2 = .86	
.29	--				
.06	.50	--			
.12	.11	.46	--		
.16	.06	.39	.42	--	
.01	.47	.15	.23	.22	--

Original Simplex Matrix, Group 2

--				Q^2 = .92	
.23	--				
.01	.12	--			
.04	.25	.58	--		
.05	.01	.68	.38	--	
.03	.14	.48	.52	.21	--

Improved Simplex Matrix, Group 2

--				Q^2 = .93	
.23	--				
.04	.25	--			
.03	.14	.58	--		
.01	.12	.68	.38	--	
.05	.01	.48	.52	.21	--

TABLE 32.--Continued.

Original Simplex Matrix, Group 3, Attitude Object "Black"

--				Ω^2 = .94	
.47	--				
.13	.22	--			
.21	.13	.50	--		
.12	.05	.37	.60	--	
.07	.03	.04	.19	.17	--

Improved Simplex Matrix, Group 3, Attitude Object "Black"

--				Ω^2 = .96	
.47	--				
.22	.13	--			
.13	.21	.50	--		
.05	.12	.37	.60	--	
.03	.07	.04	.19	.17	--

Original Simplex Matrix, Group 3, Attitude Object "Negro"

--				Ω^2 = .95	
.37	--				
.26	.28	--			
.09	.15	.33	--		
.01	.11	.11	.31	--	
.02	.04	.17	.28	.22	--

Improved Simplex Matrix, Group 3, Attitude Object "Negro"

--				Ω^2 = .95	
.37	--				
.26	.28	--			
.09	.15	.33	--		
.02	.04	.17	.28	--	
.01	.11	.11	.31	.22	--

TABLE 32.--Continued.

Original Simplex Matrix, Group 3, Attitude Object Combined

--				Ω^2 = .95	
.43	--				
.18	.25	--			
.15	.14	.41	--		
.06	.02	.26	.46	--	
.04	.03	.06	.23	.19	--

Improved Simplex Matrix, Group 3, Attitude Object Combined

--				Ω^2 = .96	
.43	--				
.25	.18	--			
.14	.15	.41	--		
.02	.06	.26	.46	--	
.03	.04	.06	.23	.19	--

Original Simplex Matrix, All Groups Combined

--				Ω^2 = .90	
.41	--				
.17	.26	--			
.15	.15	.43	--		
.07	.01	.26	.46	--	
.05	.00	.07	.21	.17	--

Improved Simplex Matrix, All Groups Combined

--				Ω^2 = .93	
.41	--				
.26	.17	--			
.15	.15	.43	--		
.01	.07	.26	.46	--	
.00	.05	.07	.21	.17	--

much larger group, the two forms of the ABS were analyzed both separately and together. Table 32 presents the correlation matrices and $\underline{Q}^2$ values for both the original matrix and for the 'best approximation' for every group and for every category. Although Kaiser's (1962) simplex approximation test does not take into account the occurrence of negative correlations, few of the groups or categories had any negative correlations in their simplexes.

Chapter V stated that a $\underline{Q}^2$ value of .70 is acceptable as reflecting a satisfactory simplex approximation according to the Jordan-Hamersma six-reversal criteria (Hamersma, 1969). No correlation matrices failed to exceed this criteria. The improved simplex matrices illustrated in Table 32 were developed by a computer re-ordering of the Levels to yield the best approximation to the simplex.

The data of Table 32 therefore, support this hypothesis: the ABS: WB-WN does form an approximate simplex. Close examination of the simplexes indicates the possibility of reversal of 'order position' between Levels 1 and 2. Further research could explore the feasibility of either refinements in these Levels or the elimination of one of them.

H-3: There is a positive relationship between a high efficacy score and positive attitudes on the ABS.

The efficacy scale "was designed to measure attitudes toward man and his environment and attempts to

determine the respondent's view of the relationship between man and his environment" (Hamersma, 1969, p. 98). It was postulated that persons who scored high on this variable would have more positive attitudes as measured by the ABS. This hypothesis was tested by correlating scores on the efficacy scale with scores on the six Levels of the ABS. Table 33 presents these data. As can be seen, there were no significant results for Groups 1 and 3. For Group 2, Levels 4, 5, and 6 (hypothetical, feelings, and reported behavior) were significant at the .05 level. Combination of Groups 1, 2, and 3 yielded significance at Levels 4 and 5 (hypothetical and feelings) and negative results for Level 1 (stereotypic) at the .05 level of significance. In Chapter VIII differences between Groups 1 and 2 are further discussed, pointing out the 'efficacy-like' behavior of Group 2. Why Group 1 seems different is not fully understood. Some of these significant results may have occurred by chance along (Type I error).

H-4: Subjects taking the Semantic Differential will give the concept 'Negro person' a significantly higher rating on the 'evaluation' dimension than the concept 'black person.'

Hypothesis 4 was tested by using a two-sample t-test for dependent samples. Table 34 presents the results and the t values required for the .05 level of significance. The concept 'Negro person' was compared with the concept 'black person' on the 'evaluation' dimension of the Semantic Differential. The results do not support hypothesis 4.

TABLE 33.--Correlations and Significance Levels[a] of Efficacy to the Six Levels of ABS: WB-WN

Level	Group 1 N=22	Group 2 N=25	Group 3 N=253	Totals N=300
1	-21 (32)	-13 (49)	-11 (09)	-11 (05)
2	09 (67)	-11 (57)	-01 (82)	007 (89)
3	08 (68)	19 (34)	07 (29)	08 (20)
4	15 (49)	51 (006)	08 (19)	12 (04)
5	21 (31)	39 (04)	11 (08)	15 (01)
6	-29 (16)	41 (03)	11 (07)	09 (11)

[a]Significance Levels in parentheses.

TABLE 34.--t-Score Values for Semantic Differential Ratings of 'Negro Person' and 'Black Person'

Evaluation	Potency	Activity
	Group 1, N = 22	
0.39	-0.43	-0.76
	Group 2, N = 25	
-0.04	-0.86	0.57

Required t-values for the .05 level of significance.
Group 1: N=22
$t_{.05;21df} = 1.72$
Group 2: N=25
$t_{.05;24df} = 1.71$

H-5: Subjects taking the Semantic Differential will give the concept 'black person' a significantly higher rating on the 'potency' dimension than the concept 'Negro person.'

This hypothesis was evaluated with a two-sample t-test for dependent samples. The results are contained in Table 34 and the t values required for the .05 level of significance. The hypothesis was not confirmed; the negative results are also in direct contradition to the stated

hypothesis. The results, however, do not reach statistical significance.

TABLE 35.--Correlations and Significance Levels[a] of Efficacy and Five Concepts of the Semantic Differential on the Evaluation Dimension

Friend	Enemy	Black	White	Negro
		Group 1, N=22		
-27 (19)	02 (91)	-01 (94)	08 (71)	23 (27)
		Group 2, N=25		
68 (0001)	-41 (03)	23 (24)	19 (33)	16 (33)

[a]Significance levels in parentheses.

H-6: Subjects taking the Semantic Differential will give the concept 'black person' a significantly higher rating on the 'activity' dimension than the concept 'Negro person.'

Hypothesis 6 was tested using a two-sample t-test for dependent samples. Table 34 presents the results. For the two groups, the hypothesis was not confirmed; for Group 1, negative, but not significant results were found.

H-7: A higher efficacy score on the ABS will be correlated with more positive scores on the 'evaluation' dimension of the Semantic Differential for the concepts 'friend,' 'black person,' 'white person,' 'Negro person,' and more negative scores for the concept 'enemy.'

For Group 1, the hypothesis was not confirmed for any of the five concepts evaluated. For Group 2, the hypothesis was confirmed (Table 35) for two of the five concepts in the direction predicted. The concept 'friend' correlated

positively (at the .05 significance level) with efficacy, and the concept 'enemy' correlated significantly in the negative direction with efficacy. The other three concepts, 'black person,' 'white person,' and 'Negro person,' did not correlate with the efficacy variable.

H-8: There will be a positive relationship between high scores on the 'evaluation' dimension of the concept 'black person' and 'Negro person' of the Semantic Differential and positive scores on the ABS.

As can be seen in Table 36 the hypothesis was not confirmed. There were some significant results between the two Semantic Differential concepts and some of the attitude Levels. The two groups, however, offset each other. Where significance was found between a Level and a concept in one group, it was not found in the other group. If the two groups' results were combined, significance would not be evident. Also, the results may be due to Type I error, finding significance where it may not actually be present. It can be concluded that no relationship was found in this study between the Semantic Differential concepts on the 'evaluation' dimension and the six Levels of the ABS.

H-9: There will be no significant correlations between high scores on the 'potency' dimension of the concepts 'black person' and 'Negro person' of the Semantic Differential and positive attitude scores on the ABS.

Hypothesis 9 was confirmed as shown in Table 37. Some positive significance was found between particular

TABLE 36.--Correlation Coefficients and Significance Levels[a] Between the Six Levels of the ABS and the 'Evaluation' Dimension of 'Black' and 'Negro' of the Semantic Differential.

Levels	Group 1 N=22		Group 2 N=25	
	Black	Negro	Black	Negro
1. Stereotypic	04 (84)	01 (95)	-30 (12)	-32 (10)
2. Normative	-04 (85)	-17 (42)	14 (47)	12 (56)
3. Moral Evaluation	45 (02)	28 (18)	01 (99)	10 (64)
4. Hypothetical Action	53 (008)	44 (03)	20 (32)	21 (29)
5. Feeling	18 (40)	20 (35)	31 (11)	32 (10)
6. Action	13 (54)	11 (61)	37 (05)	37 (05)

[a]Significance levels in parenthesis.

TABLE 37.--Correlation Coefficients and Significance Levels[a] Between the Six Levels of the ABS and the 'Potency' Dimension of 'Black' and 'Negro' of the Semantic Differential.

Levels	Group 1 N=22		Group 2 N=25	
	Black	Negro	Black	Negro
1. Stereotypic	06 (78)	04 (84)	-22 (27)	-32 (10)
2. Normative	-34 (10)	-25 (23)	-25 (22)	30 (12)
3. Moral Evaluation	-30 (14)	-05 (82)	13 (51)	06 (75)
4. Hypothetical Action	38 (06)	39 (05)	25 (21)	-02 (90)
5. Feeling	12 (56)	13 (54)	41 (03)	09 (64)
6. Action	21 (32)	38 (06)	44 (02)	-06 (76)

[a]Significance levels in parenthesis.

TABLE 38.--Correlation Coefficients and Significance Levels[a] Between the Six Levels of the ABS and the 'Activity' Dimension of 'Black' and 'Negro' of the Semantic Differential.

Levels	Group 1 N=22		Group 2 N=25	
	Black	Negro	Black	Negro
1. Stereotypic	-11 (62)	19 (37)	-33 (09)	-38 (05)
2. Normative	02 (92)	14 (50)	29 (13)	28 (15)
3. Moral Evaluation	35 (09)	16 (46)	-06 (75)	13 (50)
4. Hypothetical Action	39 (06)	36 (08)	16 (41)	34 (08)
5. Feeling	32 (13)	22 (30)	15 (47)	20 (30)
6. Action	08 (70)	13 (54)	18 (36)	35 (07)

[a]Significance levels in parenthesis.

concepts and Levels, but this was only intermittent. Also, it was not consistently found between the two groups tested.

H-10: There will be no significant correlations between high scores on the 'activity' dimension of the concepts 'black person' and 'Negro person' of the Semantic Differential and positive attitudes on the ABS.

Hypothesis 10 was confirmed; no significance was found (Table 38) between the six Levels of the ABS and the concepts of 'black person' and 'Negro person' of the Semantic Differential. Some significance was found between certain terms and Levels.

CHAPTER VIII

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Democracy will not come
Today, this year
    Nor ever
Through compromise and fear.

I have as much right
As the other fellow has
    To stand
On my two feet
And own the land.

I tire so of hearing people say,
LET THINGS TAKE THEIR COURSE.
TOMORROW IS ANOTHER DAY.
I do not need my freedom when I'm dead.
I cannot live on tomorrow's bread.

    Freedom
    Is a strong seed
    Planted
    In a great need.
    I live here, too.
    I want freedom
    Just as you
        (Lanston Hughes, 1966, p. 285).

This chapter will briefly review the purpose of the study; will summarize the main points stressed in the review of the literature; and will state the results of the data and hypotheses. Lastly, the implications and recommendations for futher research will be discussed.

Summary of the Study

Purpose

One of the major aims of this study was to discover whether or not the two terms, 'black' and 'Negro,' elicit different "attitude behaviors." Two scales, the Semantic Differential and the racial Attitude Behavior Scale, were used for evaluation of this hypothesis. A second purpose was to review the theoretical basis of the ABS, exploring psychological measurement and specific areas of attitude research that led to the development of this scale. The review of attitude research contained within this thesis serves as introductory material for discussion of the ABS.

Literature

A review of attitude research prior to Guttman-Jordan "attitude-behavior" theory and facet analysis was conducted. Beginning with early Greek philosophy, the statistical basis for attitude research was traced through Greek Cosmologic and sophist theory, British Empiricism and German Experimentalism, the factor analytic techniques of Spearman and Thurstone, and the facet analysis of Guttman. The theoretical development of attitude research began with Plato, and proceeded through the school of 'act' psychology, Sully's classification of mental states, Ward's work on the subject-object relationship, Allport's attitude research, McGuire's tripartite attitude classification

scheme, and Jordan's research on "attitude-behaviors" including his development of the series of Attitude Behavior Scales (ABS). With the ABS approach, it has been possible to analyze the facets of attitude and provide a more rigorous, methodological framework for attitude research. The literature on race and race prejudice was reviewed, concentrating on the areas of race labelling, racial attitudes, and the language of prejudice. Lastly, a review of research on race, color labelling, and the Semantic Differential was undertaken.

Instrumentation and Methodology

Jordan and Hamersma (1969) constructed a series of attitude scales based on the facet methods of Guttman (1959). The scale used in this study, ABS-WB/WN-G is one in this series of scales. These Attitude Behavior Scales have been applied to numerous 'minority' groups cross-culturally (Bray, 1972; Jordan, 1972; Smith, 1973).

Design and Analysis

The ABS-WB/WN-G scales were administered to three groups of college students at Michigan State University. These students were college seniors majoring in Education, planning a career in teaching. Two ABS scales were administered, the "ABS toward blacks" and the "ABS toward Negroes." One large group of 254 students was tested Winter Term of 1972; two other smaller groups (samples of

22 and 25) were tested Spring Term of 1972. These two latter groups were also given a Semantic Differential scale. An analysis was performed comparing the results of the Semantic Differential with the results of the ABS. Several hypotheses were tested using correlation coefficients, multivariate analysis of variance procedures, two-sample t-tests, and the Kaiser $\underline{Q}^2$ simplex approximation.

Research Findings

The results of the study indicated there were no differences between the two groups, those taking the "ABS toward blacks" and those taking the "ABS toward Negroes," on the six Levels of the ABS. The two concepts, 'black' and 'Negro,' elicited the same "attitude-behaviors" as measured by the ABS.

The attitude data from the three samples did approximate a Guttman simplex. All groups and the combined totals excelled Hamersma's (1969) .70 criterion $\underline{Q}^2$ value required for approximating a simplex.

For the efficacy variable, significant relationships were obtained in one group on Levels 4, 5, and 6 (Hypothetical, Feeling, and Self-Reported Behavior); the other two groups did not show significant relationships. For the combined totals, some significant results were found (Levels 4 and 5--Hypothetical and Feeling).

The hypotheses regarding differences between the concept 'black person' and 'Negro person' on the 'evaluation,'

'potency,' and 'activity,' dimensions of the Semantic Differential were not confirmed.

Some correlations (two out of the five concepts of the Semantic Differential) were found between efficacy on the ABS and the 'evaluation' dimension of the Semantic Differential for Group 2; for Group 1, no correlations were found for any of the five concepts.

No significant correlations were found between the 'evaluation,' 'potency,' and 'activity' dimensions of the Semantic Differential and the six Levels of the ABS.

Discussion

The following is a discussion of the results of the hypotheses of the study.

H-1: Multivariate analysis of variance was used to test this hypothesis for the three groups evaluated. The results indicated that no differences were found between the two terms, 'black' and 'Negro.' White students taking the "ABS toward blacks" and those taking the "ABS toward Negroes" responded in a similar manner on each of the six Levels of the ABS. Thus, the concepts, 'black' and 'Negro,' did not elicit different "attitude-behaviors" as measured by the ABS. This finding is in contradiction to Williams' (1966) study that found white students evaluating 'black person' more negatively than 'Negro person' on a Semantic Differential scale. The results of this present study using

the ABS are in accord with a more recent study conducted by Lessing and Zagorin (1972), that found essentially no differences in evaluation of the two terms.

These contradictory findings may be due to a time lapse between the studies conducted. Earlier studies that did find a difference, were conducted at a time when 'Negro' was the more accepted term applied to black people. The black power movement was just beginning to surface at that time, and much resentment and misunderstanding was expressed by whites. At the present time, whites, especially the student population, have become more aware of the Movement, and perhaps are now beginning to accept the new terminology of the black power movement. Whether acceptance of the terminology of the black power movement means that whites will or are beginning to accept more of "black culture" itself cannot be concluded by this study. However, an interesting speculation would be that acceptance of the term 'black' (and 'Afro-American') by whites may be an indication of acceptance of "black culture."

> The data from the present study [Lessing and Zagorin, 1972, p. 69], when viewed in the light of these other studies, suggests that as of 1968-1969 the major effect of black power ideology upon young people was the removal of the odious connotations of black without giving it clear and unequivocal priority over other non-white ethnic designations.

H-2: The Guttman simplex approximation hypothesis was confirmed. This conclusion was reached by both visual inspection of the simplexes in Table 32 and utilization of

Kaiser's $\underline{Q}^2$. Hamersma (1969) arrived at a $\underline{Q}^2$ value of .70 as the minimal level to conclude that data had approximated a simplex. The possible range of scores is from 0.00 to 1.00. All the matrices in this present study exceeded the .70 $\underline{Q}^2$ value. For the original matrices, the $\underline{Q}^2$ values ranged from .85 to .95. This is an improvement over the other racial ABS simplexes. Dell Orto (1970) did not obtain a simplex in his study of rehabilitation counselor trainees; Frechette (1970) found simplexes ranging in value from .54 to .91 in his study of French and English speaking Canadians; Williams (1970) study of racial attitudes of black and white policemen revealed simplexes from .73 to .90.

In the present study, the directions in the instructions for some of the Levels had been modified; these changes may explain why higher simplex scores were obtained. These changes mainly concern the subject-object relationship; the attempt was to make the Levels more understandable to the individual taking the scale. Changes were made in Levels 1, 2, 3, and 5. Level 6 was modified in the number of item choices. Dell Orto used a four-response choice option, the fourth choice being, "no experience." The present scale omitted this "no experience" option in the item choices. Instead, the directions specified that subjects having no experience should omit the entire Level.

The changes made in Levels 1, 2, 3, and 5 are illustrated below, i.e., from the WN-G version (Appendix B-2):

Level 1

DELL ORTO SCALE:

This section contains statements about ideas which most other whites have about Negroes. Circle or fill in the answer sheet number that indicates how other whites compare themselves with Negroes. Please answer all questions.

Other Whites believe the following things about Whites as compared to Negroes:

1. Whites can be trusted with money
    1. more than Negroes
    2. about the same as Negroes
    3. less than Negroes

PRESENT SCALE:

This section contains statements about ideas which other Whites have about Negroes. Circle or fill in the answer sheet number that indicates how other Whites compare Negroes with themselves. Please answer all questions.

Other Whites believe the following things about Negroes as compared to Whites:

1. Negroes can be trusted with money
    1. less than Whites
    2. about the same as Whites
    3. more than Whites

Level 2

DELL ORTO SCALE:

This section contains statements about things which other Whites like you may believe about Negroes. Please choose the answer that indicates what you think others believe about Negroes.

Most Whites generally believe the following about Negroes:

PRESENT SCALE:

This section contains statements about things which most Whites generally believe others would experience when interacting with Negroes. Please choose the answer that indicates what you think most others believe about Negroes.

Level 3

DELL ORTO SCALE:

This section contains statements about ways in which you yourself should act toward Negroes. Please choose the answer that indicates how you feel you should act or believe.

In respect to Negroes, do you yourself believe that it is usually right or usually wrong:

PRESENT SCALE:

This section contains statements of the right or wrong way of behaving or acting toward Negroes. You are asked to indicate what you yourself believe others think should be done with respect to Negroes.

In respect to Negroes, what do you believe others think is right or wrong:

Level 5

DELL ORTO SCALE:

This section contains actual feelings that White people may have about Negroes. You are asked to indicate how you feel about the following statements.

How do you actually feel toward Negroes:

PRESENT SCALE:

This section concerns actual feelings that you yourself may have about Negroes. You are asked to indicate how you feel about the following statements.

How do you actually feel toward Negroes:

The large group of 254 students resulted in a $\underline{Q}^2$ value of .95; results for a combination of the three groups yielded a $\underline{Q}^2$ of .90. According to Guttman's (1959) Contiguity Hypothesis, this means that Levels closer to each other were more related than Levels more distant. This simplex approximation means that the semantic six-Level structure of the ABS has structural relevance.

Thus, the ABS is one of the only attitude scales currently in the literature that has formulated and instrumented a facetized definition of the concept, attitude. The five-facet, six-Level design allows a researcher knowledge of whether he is dealing primarily with the cognitive, affective, or overt action (behavioral) component of attitude. Other researchers (i.e., Allport, 1954; McGuire, 1969) have defined attitude as being composed of cognitive, affective, and conative elements, but their definitions were purely semantic and not instrumented. Jordan's (1971a) system divides this tripartite classification into six distinct Levels; the Contiguity Hypothesis and facet system design gives the Levels structural and semantic relevance to one another and an increasing proportion of strength (cognitive to affective to conative/behavioral) as one proceeds down the six Levels.

H-3: The efficacy variable purports to measure the amount of control a person feels he has over his environment. It was hypothesized that those who scored high on

the variable of efficacy would have more positive scores on the six Levels of the ABS. No significant results were found for Groups 1 and 3. However, significant findings were evident for Group 2 on Levels 4, 5, and 6 (Hypothetical, Feeling, and Self-reported Behavior). Also, when the three groups were added together, significant results were obtained for Levels 4 and 5. For Level 1, all groups and the combined scores are in the opposite (negative) direction. The total of all these groups yields a score close to the .05 level of significance, in the negative direction. The positive scores on Levels 4 through 6 for Group 2 and Levels 4 and 5 for the combined group totals involve affective and conative material.

The negative results for Level 1 represent responses to cognitive material. This Level is a measure of an individual's responses to Stereotypic items on the Attitude Behavior Scale. The lack of significant relationships at Levels 2 and 3 and the negative scores for Level 1 may indicate that the variable, efficacy, correlates with the ABS only at the affective and conative Levels; that "sense of control over one's environment" is related to feeling and behavioral dimensions. Clinical observations supported this notion for Group 2. This group was a much more interested, active, and responsive group, as opposed to Group 1. On appearance, there was definitely a marked difference between these two groups. This interesting finding is

discussed more extensively under H-7 of this chapter. For more liberal students (presumably Group 2), efficacy correlates with the more affective and behavioral Levels of the ABS, whereas for more conservative students (presumably Group 1), efficacy does not correlate with the ABS Levels. From the differences in the views expressed and the topics chosen, it appeared that Group 2 was composed of more liberal students than Group 1. It should also be noted that the three black students in Group 2 helped stimulate discussion. However, the two most vocal of the black students were not present the first two days of class, and discussion was still much more intense than in Group 1.

Frechette (1970) found a correlation between efficacy and Levels 1 and 4 of the ABS. It can be conjectured that his Canadian samples were more conservative than Group 2 and more similar to the students in Group 1. To test for this possibility, one might administer the ABS to a sample of students known to be more liberal than these groups tested.

Frechette (1970) found different results; his administration of the racial ABS revealed that Levels 1 and 4 of the ABS correlated positively with efficacy, whereas Levels 5 and 6 did not. He concluded that efficacy may correlate with less behavioral and affective areas, and more with cognitive material.

The present author interprets the ABS Levels in a different manner than Frechette. Level 1, Stereotypic, is indeed a measure of cognitive material; however, Level 4, Personal Hypothetical Interaction, is primarily a measure in the affective area. With this interpretation, a portion of Frechette's results are consistent with the present study. His results for Level 4 parallel the results found on positive correlation between Level 4 and the variable, efficacy. The present author considers this correlation with efficacy as one involving an affective Level on the ABS, not a cognitive one, as Frechette believed.

Frechette also noted a positive correlation between Level 1 and efficacy; the present author agrees that this Level is a measure of cognitive responding. The present study of college students found no correlation between the efficacy variable and Level 1.

Several reasons may suggest why this difference was found between the two studies. The populations were different. Frechette's sample was not only drawn from a different country (Canada), but involved distinct urban areas (Toronto and Montreal). The sample was considerably older and had several years working experience in the occupational world. The present study used a sample of college seniors majoring in education in a large midwestern university, a sample that can be considered less urban than

Frechette's. Also, the attitude object was different in the two studies; Frechette's study investigated attitudes of French and English speaking Canadians toward West Indian Immigrants, while the current study investigated white attitudes toward blacks in the United States.

Lastly, these differing results indicated that those in the Canadian sample tested who have a high degree of efficacy have a clearer conception of what prejudices their society has toward West Indian Immigrants than do those with a lower degree of efficacy. No differences were found for those who scored high or low on efficacy and Level 1 of the ABS in the United States college sample, assessing white attitudes towards blacks.

Since the data are correlations, inferences as to cause and effect cannot be made. One can only state that, in the present study, a positive relationship was found between efficacy and Levels, 4, 5, and 6 on the racial ABS.

H-4: White students did not rate 'black person' more negatively than 'Negro person' on the 'evaluation' factor of the Semantic Differential. This supports Lessing and Zagorin's (1972) argument that the words 'black' and 'Negro' no longer represent different connotations to white college students. Both their results and the results of the present study indicated that white college students no longer preferred the term 'Negro' over 'black' when referring to black people. Jordan and Hamersma (1969) found that

whites preferred 'Negro' over 'black' in the late 1960's. Williams' (1966) study indicated that white college students had rated 'Negro' higher in acceptance than 'black.' The time factor between the two sets of studies may have played a large part in the differences found. Whereas, in the 1960's the term 'black' was still relatively unacceptable by whites; by the early 1970's, whites may have become more familiar with the term, and hence, more accepting of it.

H-5 and H-6: The results from Hypotheses 5 and 6, indicate that white college students do not differentiate between the concepts 'black person' and 'Negro person' on the 'potency' and 'activity' dimensions of the Semantic Differential. Lessing and Zagorin (1972) stated the following results for both black and white college students: "Blacks were seen as the strongest, most potent, and most active. Negroes were viewed as slightly less strong and active . . ." (p. 70). The results of the present study found just the opposite for 'potency' and 'activity.' 'Negro person' was evaluated slightly higher on the 'potency' and 'activity' dimensions of the Semantic Differential than 'black person.' The results showed this trend in direction, but were not found to be significant.

The black power movement has now been present for several years. Perhaps this exposure, especially prevalent on the college campuses, has become more accepted by white students; they no longer differentiate between the concepts, 'black' and 'Negro.'

The differences in the samples tested may also have had an effect. Lessing and Zagorin (1972) tested undergraduate students in five midwestern colleges and universities. The present study tested seniors majoring in education in a large midwestern university.

There was a time difference between this present study and the one conducted by Lessing and Zagorin (1972). They collected their data in 1968-1969, while the data for the present study was gathered in 1972. Many other factors, besides the black power movement, have occurred in this time period that could influence the results.

The testing in the Lessing and Zagorin study was conducted by a biracial team or by a black professor. The present study used white examiners. This difference may have played a part in influencing the results of the two studies.

H-7: Hypothesis 7 was partially confirmed for Group 2 and not confirmed for Group 1. Group 2's evaluation of 'friend' correlated positively with the efficacy variable, and 'enemy' correlated negatively with efficacy. Both these results were as predicted. This group's evaluation of the three other concepts, 'black,' 'white,' and 'Negro,' did not correlate with efficacy.

Clinically, there was a noticeable difference between Groups 1 and 2. Both groups were sections of Education 450, titled, "Attitudes Toward Minority Groups."

The first section was a very quiet, seemingly uninterested group, while the second section had many spontaneous and sometimes quite heated discussions concerning minorities, prejudice, and racism. It is felt by this observer, that Group 2 was more interested in studying, learning about, and discussing minority problems than was Group 1. It is possible that there were some selectivity variables that made the two sections different. Section 2, the more active group, was held at 12:20 in the afternoon, while Section 1 met at 8:00 a.m. Perhaps the students that were interested in the subject matter signed up early, choosing the afternoon section over an early morning section. More students in the morning section indicated that it was one of the only sections left (out of 74 'modules' offered, covering various topics) when they signed up.

Efficacy is a measure of a person's feelings of control over his surrounding environment. Perhaps those students who felt more in control of their surroundings (high in efficacy) came earlier to sign up for the section of their choice, and were able to choose the afternoon section. Those students lower in efficacy may have signed up late when only a few 'modules,' including the 8:00 a.m. "Attitudes Toward Minority Groups" section, were not filled. Since this analysis is based on clinical observations, additional studies controlling for intentionality of choice (voluntary versus no choice) need to be administered.

The significance of these results must remain tentative. Chance significance (Type I error) may have produced a greater correlation than actually occurred.

H-8: Apparently, the ABS and the 'evaluation' dimension of the Semantic Differential are not measuring the same thing. Both scales claim to be measuring attitude. If this is true, then the two scales are measuring different aspects of attitude. The Semantic Differential scale is concerned with semantic meanings of words: "score variation along the E 'evaluation' dimension covaries closely with the score variation on conventional attitude tests" according to Osgood, Suci, and Tannenbaum (1957, p. 193). Jordan's Attitude Behavior Scale is a relatively new attitude scale. It is based less on conventional attitude tests and judgments of 'experts' in the areas of race and race relations and more on Guttman's facet analysis.

According to Fishbein (1965), Osgood defined attitude as a "predisposition to respond;" Jordan (1971a) on the other hand, defined "attitude as behavior," and stated that attitude was not a "predisposition to respond." Thus, the authors of the two scales defined attitude in two different manners. It is difficult to identify exactly what the Semantic Differential is measuring. Jordan's system of "attitude-behavior" is based on a five-facet, six-Level system; a structural system underlies his semantic definition of attitude. It is conceivable that the two

scales, the Attitude Behavior Scale and the Semantic Differential, are simply not comparable instruments. The implications of this are discussed in the "Recommendations for Further Research" section of this chapter.

H-9 and H-10: It was speculated that the 'evaluation' factor of the Semantic Differential would correlate positively with the six Levels of the ABS. Further, it was speculated that if these two scales correlated on a measure of attitude ('evaluation' on the Semantic Differential and the six Levels of the ABS), the two additional measures of the Semantic Differential, 'potency' and 'activity,' would not necessarily correlate with the ABS Levels. It was hypothesized that 'potency' and 'activity' would not correlate with the ABS because the authors of the Semantic Differential felt that 'evaluation' was a strong measure of attitudes, but 'potency' and 'activity' were much weaker measures of attitude. Hypotheses 9 and 10 were confirmed; no correlation was found between 'potency' and 'activity' on the Semantic Differential and the six Levels of the ABS.

Recommendations for Further Research

'Black' Versus 'Negro'

The present data are limited to white senior education majors in a particular, large midwestern university. The study by Lessing and Zagorin (1972) was also conducted

in midwestern universities. It is believed that although these results may generalize to other American universities and colleges, different results might be found in non-college populations. If older persons (particularly those without a college education) were given the scales, they might respond more positively to the term 'Negro' than to the term 'black.' This speculation is raised because before black power ideology was a prominant issue, college students responded more positively to the word 'Negro' than to 'black' (Williams, 1966). One possibility is that the black power movement, stressing the slogan "black is beautiful," has had an effect in decreasing the negative connotations of the word 'black.' A second possibility is that white college students are beginning to accept the black power and culture movement, and the notion that black people prefer to be called 'black' rather than 'Negro.' In 1969, Jordan and Hamersma felt that the term 'black' was more acceptable to the black population, but that 'Negro' was still preferred by whites. It appears that the word 'black' can now be used when testing white college populations.

It would be interesting to give the two ABS scales to a black population to test how they react to the word 'black' versus 'Negro.' This author would conjecture that the word 'black' would elicit more positive attitudes on the ABS than would the word 'Negro' among black people.

This result has a broader implication when viewed with the implications concerning color labelling and word connotations. Throughout history, the word black has always had negative connotations associated with it; recent studies point out that these negative associations still exist, contrasted with positive associations for the word white. The words, black and white, are often seen as polar opposites.

The black power movement, in this country, has been promoting the theme, "black is beautiful." The trend has been toward elimination of the word Negro in reference to black people. In place of Negro, black power advocates have suggested use of such alternatives as: Afro-American, Afram, African American, and black, Williams (1970) suggested that since the term black has been so filled with negative connotations, perhaps it would be beneficial to eliminate reference to racial groups by color names.

Results of the present study indicated that white college students do not necessarily associate the negative references of the word black with persons so designated as black. The concept "black person" did not elicit any more negative evaluations than "Negro person" on the two attitude instruments. Therefore, it seems that use of the term black in reference to the black race, will not necessarily carry with it the negative connotations associated with the word black.

Efficacy and the ABS

Clinical observation of the two Spring Term sections of "Attitudes Toward Minority Groups" raised some very interesting questions. Group 2 was much more involved with discussion of minority problems and prejudice. Their interest level was high throughout each individual classroom session and throughout the three weeks of class. Group 1, on the other hand, appeared more to be just "putting their time in" and little interest or discussion could be generated in this section. At the same time, there was a significant difference between correlations of efficacy scores and the ABS. Group 2's scores on efficacy correlated positively with the three "feeling and action" Levels of the ABS (Levels 4, 5, and 6) while Group 1's scores did not correlate with any of the six ABS Levels. The correlations obtained in Group 2, may indicate that those who feel in control of their environment also score positively on feeling and action levels of racial "attitude-behaviors."

It can be postulated that individuals in Group 2 were there more because they voluntarily chose to be, while those in Group 1 were there because of a "no other choice position." The presence of three black students in Section 2 also helps confirm this. Lastly, more students in Group 1, when asked why they chose this section, stated "no choice," than students in Group 2. Since this is only a clinical speculation and voluntariness of choice was not

controlled for, a future study with the racial ABS might seek to control for voluntariness and/or interest level and find out if those individuals more interested in racial issues, score higher on efficacy and have more positive "attitude-behaviors" on the affective and conative Levels of the ABS. This variable needs additional study, especially since an earlier study with the racial ABS (Frechette, 1970) revealed opposite results. Frechette found that the variable, efficacy, was significantly related to Levels 1 and 4, on the ABS.

The Simplex Approximation and the ABS

The simplex approximation for the racial ABS in this study, was high enough to state a semantic and structural relationship between the six Levels. Jordan and his associates have postulated a definition of "attitude-behavior" that is founded on a semantic structure. It was first necessary to arrive at a definition for "attitude-behavior;" the next step is to include the concept of "attitude-behavior change" into this approach. The definition of "attitude-behavior" can be made more relevant if the notion of change is included. Basically, what is needed is a monor redistribution-modification of Jordan's five-facet, six-Level theory.

The following is a proposal to include "attitude-behavior change inclination" into the present facet analysis of "attitude-behavior." The five-facet, six-Level system should be maintained within this present modification.

Levels 1 through 3 might be combined into two Levels, or one of these Levels might be eliminated. Levels 4 through 6 are the important Levels, since they deal with affective and conative behavior, and should be retained as they are presently defined. With the elimination of one of the first three Levels or modification thereof, an 'additional' Level can be added without destruction of the basic structural design.

This additional Level would attempt to measure "attitude-behavior change inclination"--self-reported areas of change concerning racial interaction that would be 'most' acceptable and 'least' acceptable to change. In other words (for the racial scale), what areas would be acceptable for a particular individual to change that would bring him into closer contact and/or relationships with the 'race' in question. The directions and items for this Level would encompass the following:

I would like the opportunity to work with blacks;

to move into a racially integrated neighborhood;

etc.

This additional Level would contain two sets of questions, the second set to include and differentiate those who have had the experiences. This second question (immediately following each item) would tap satisfaction with the experience. The individual with experience would be asked whether he was (a) dissatisfied, (b) uncertain, or

(c) satisfied, with the particular experience. This procedure would aid in detecting those who have already had the experience, what their perceptions of the experience were, and what percent of the sample being tested have had the experiences.

The facets would have to undergo some modification for the remaining five Levels to encompass the newly modified Level within the five-facet design. Thus, the ABS would be obtaining data in areas of resistance to and acceptance of "attitude-behavior change." Researchers would then have a better idea as to what areas were reported as being "open to change" and the degree of resistance that might be encountered for each issue. Areas of 'agreeable' change could be readily implemented. Areas of high resistance could be investigated further before attempting change. Needed programs could be implemented in the difficult areas for preliminary study before change was attempted. Another possibility is that as the areas of <u>least resistance</u> are implemented, i.e., integrated jobs, integrated colleges, areas of <u>more resistance</u>, i.e., integrated high schools, integrated housing, would become easier to implement.

An example of this lies in the area of the recent busing controversy. If the attitudes of people toward busing to achieve racial integration of schools could have been evaluated (i.e., via the new Level), many of the complications that arose may have been reduced or eliminated. If it had

been known that so much resistance would be encountered, alternatives could have been presented. This is not to say that measures such as busing should not be undertaken, only that each action program should have a good chance in succeeding to change "attitude-behaviors" in a positive direction.

Additional Uses of the ABS

The ABS is too long an instrument; some restlessness was evidenced in subjects taking the instrument. Elimination of items from each Level is recommended. Item analysis could be run on the items, retaining the better items. This might also improve the simplex.

The ABS should be used in experimental situations. It could be used 'pre' and 'post' to measure amount of attitude change produced in various classroom and/or experience situations.

Longitudinal studies can be conducted with the ABS. "Attitude-behaviors" could be tested yearly on certain groups to assess the amount of change occurring. This could be done in a high school or college, as students proceed through an educational program.

The racial ABS can be used to test attitudes among different populations. Studies could be conducted in different geographical regions of the United States; populations such as rural groups, differing age groups, groups

from different income strata, and samples from different ecnomic levels could be sampled. Also, the scale should be administered to some all black groups of subjects to evaluate racial attitude-behaviors of blacks toward whites.

The ABS and the Semantic Differential Compared

The major differences between the ABS and the Semantic Differential can be found both in the actual design of the scales and in the two authors' definitions of attitude.

Osgood, Suci, and Tannenbaum (1957, p. 9) saw the Semantic Differential as relating "to the functioning of representational processes in language behavior" and as serving as an index of these processes. These authors were more concerned with the language and verbal aspects of attitude than with behavioral dimensions. Also, their scale does not involve specific situations, the attitude object in-situation, but rather asks an individual to rate and evaluate the perceived goodness or badness of a concept as it relates to a group of people or idea.

The ABS, on the other hand, is more concerned with the behavioral dynamics of attitude; the author of the scale views attitude and behavior as one concept, hence, his use of the term, "attitude-behavior." He defines attitude-behavior along six Levels, from cognitive to affective to conative aspects. Also, the ABS differs from the Semantic Differential in that the ABS asks the subject to evaluate

specific situations that he may have encountered in interacting with the particular group in question. This involves evaluation of the attitude-object toward a situation, while the Semantic Differential involves evaluation of an attitude-object in a more global or undefined space.

This is not to say that either instrument fails to measure attitude. Each author defined attitude as he saw it and then set out to measure attitude as he had defined it. Each scale must be viewed as measuring attitude within a particular context. If the data from two attitude scales are to be compared with each other, they must at least have similar semantic content via which to assess the concept of attitude.

If two attitude instruments are used for the purpose of comparison, they should be selected so that the authors define and instrument similarly the concept, attitude.

Summary

1. The two forms of the ABS, "ABS Toward Blacks" and "ABS Toward Negroes," did not elicit different "attitude behaviors" as measured by the six Levels of the scale. Implications concerning this result were discussed.
2. The racial ABS and the Semantic Differential used in this study do not correlate with one another; hence, the two instruments do not seem to be measuring the same 'aspects' of attitude.

3. Some correlations were found between the variable of efficacy on the ABS and Levels 4, 5, and 6 on the Attitude Behavior Scale. These results are only tentative and further research is suggested before definite conclusions can be reached.
4. The racial ABS data resulted in a good approximation of the simplex semantic structure between the six attitude-behavior Levels.
5. Suggestions for incorporating "attitude-behavior change inclination" into the Attitude Behavior Scales were discussed.
6. The study using the racial ABS could be replicated on different groups of subjects: all blacks, different geographical locations (southern states), rural populations, different age groups, income groups, and economic levels.

Of the methods presently available for assessing and defining attitudes, Jordan's is one of the few that attempts to assess attitudes on both a semantic and a statistical or structural basis. One can now begin to use the ABS approach both to study the structure of attitudes, the determinants or origins of attitudes, and to suggest procedures for changing attitudes.

Community 'operationalism' is necessary if the 'theory' is to become relevant to the world beyond the academic arena. Unless theories are applied to the community,

their value must be questioned. It is not enough to simply devise a theoretical model or system--the theory must be put to some practical use. Jordan and his associates have defined both semantically and structurally what they see as "attitude-behavior." The next step, proposed in this thesis, is to incorporate "attitude-behavior change inclinations" into this theoretical system.

One can then use the theory to study attitudes and attitude change of individuals in society. Where it is apparent that negative attitudes exist that are detrimental to other people, programs to change these attitudes can be instrumented. The Attitude Behavior Scale can be used to test whether or not attitude change is occurring and on what Levels. Jordan's (1971a) research indicated that change in cognitive Levels (Levels 1, 2, and 3) does not necessarily produce positive overt behavioral changes. An example of this is that giving additional information about race and race prejudice in a classroom teaching situation does change an individual's cognitive perceptions of other persons attitudes but will not necessarily change his own overt behavior.

To change personal overt behavior, changes must occur in an individual's attitudes on Levels 4 through 6, the affective and conative dimensions of attitude-behavior. Applied programs to change negative attitudes must be directed toward these latter Levels of attitude-behavior.

This involves setting up situations where members of different races are interacting with one another behaviorally, and also 'enjoying' or 'benefiting' from the contact. Without this personal interaction and enjoyment of it, it appears that negative attitudes will remain resistant to change.

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APPENDICES

APPENDIX A

GLOSSARY

GLOSSARY[1]

Approximation--see "simplex approximation".

Attitude--"Delimited totality of behavior with respect to something" (Guttman, 1950a, p. 51)

Attitude-behavior--the hyphenated term denotes that attitude is a subclass of behavior rather than an intervening variable or a "predisposition" to behavior.

Content--situation (action, feeling, comparison, circumstances) indicated in an attitude item; generally corresponds to "lateral struction".

Definitional statement--specification of characteristics proper to an item of a given Level member, typically stated in phrase or clause form.

Definitional system--ordered group of definitional statements or of the corresponding Level members; typically either the group constituting a "semantic path" or the complete group of 12 Level members in the "semantic map".

Directionality--characteristic of an item, sometimes called positive or negative, determining agreement with the item as indicating favorableness or unfavorableness toward the attitude object.

Element--one of two or more ways in which a facet may be expressed; in the present system, all joint facets are dichotomous, expressed in one of two ordered elements.

Facet--one of several semantic units distinguishable in the verbal expression of an attitude; in the present system, five dichotomous facets are noted within the joint struction.

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[1]Credit is given to Maierle (1969) for most of the work in developing this glossary.

Facet profile--see "struction profile".

Joint struction--see also "struction", "lateral struction"--"operationally defined as the ordered sets of . . . five facets from low to high across all five facets simultaneously" (Jordan, 1968, p. 76); that part of the semantic structure of attitude items which can be determined independently of specific response situations.

Lateral struction--see also "struction", "joint struction"--that part of the semantic structure of attitude items which is directly dependent on specification of situation and object; a more precise term than "content".

Level--degree of attitude strength specified by the number of strong and weak facets in the member(s) of that Level; in the present system, six ordered Levels are identified: Level 1 is characterized by the unique member having five weak facets; Level 2, by members having four weak and one strong facet . . . Level 6, by the unique member having five strong facets.

Level member--one of one or more permutation(s) of strong and weak facets which are common to a given Level; in the present system, 12 Level members have been identified: three on Level 2, four on Level 3, two on Level 4, and one each on Levels 1, 5, and 6.

Map--see "semantic map".

Member--see "Level member".

Path--see "semantic path".

Profile--see "struction profile".

Reversal--change in a specified order of Levels or of correlations, involving only the two indicated Levels or correlations.

Semantic--pertaining to or arising from the varying meanings, grammatical forms, or stylistic emphasis of words, phrases, or clauses.

Semantic map--two-dimensional representation of hypothesized relationships among six Levels and among 12 Level members.

Semantic path--ordered set of Level members, typically six, such that each member has one more strong facet than the immediately preceding member and one less strong facet then the immediately following member.

Semantic possibility analysis--linguistic discussion of the implications of the five dichotomous joint facets identified in the present system; of 32 permutations, only 12 are considered logically consistent.

Simplex--specific form of (correlation) matrix, diagonally dominated and decreasing in magnitude away from the main diagonal.

Simplex approximation--matrix which approaches more or less perfectly the simplex form; existing tests (Kaiser, 1962; Mukherjee, 1966) reflect both ordering of individual entries and sizes of differences between entries and between diagonals.

Strong(er)--opposite of weak(er)--term functionally assigned to one of two elements, to a facet expressed by its strong element, or to a Level member characterized by more strong facets than another Level member; the strong-weak continuum is presently examined as unidimensional.

Struction--see also "joint struction", "lateral struction"--semantic pattern identifiable in any attitude item, or the system of such identifications.

Struction profile--specification, typically indicated by small letters and numerical subscripts, of the permutation(s) of weak and strong elements or facets in a Level member or a set of Level members; or of permutations of lateral elements or facets.

Transposition--change in a specified order of Levels or of correlations involving a change in position of one Level or correlation and the corresponding one-place shift in the position of following or preceding Levels or correlations.

Weak--opposite of "strong" (which see).

APPENDIX B-1

ATTITUDE BEHAVIOR SCALE WB-G

ATTITUDE BEHAVIOR SCALE-WB-G

DIRECTIONS

This booklet contains statements of how people behave in certain situations or feel about certain things. You, yourself, or other White persons often behave in the same way toward Blacks. You also have some general ideas about yourself, about other White persons like you and about Blacks. Sometimes you feel or behave the same way toward everyone and sometimes you feel or behave differently toward Blacks.

This questionnaire has statements about ideas and about behavior. Each statement of this questionnaire is different from every other section, although some of the statements in each section are similar. Your answers in one section, therefore, may be the same as answers in another section, or your answers may differ from section to section. Here is a sample statement:

Sample I

Other Whites believe the following things about Blacks as compared to Whites:

1. Chance of Blacks being taller

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

If other Whites believe that Blacks have less chance than Whites to be taller, you should circle the number 1 as shown above or if you are using an IBM answer sheet make a heavy dark line on the answer sheet between the two lines after the number as follows:

1. 1 ▬ 2 ═ 3 ═ 4 ═ 5 ═

********** DO NOT PUT YOUR NAME ON THE BOOKLET **********

by: © Richard J. Hamersma
John E. Jordan
College of Education
Michigan State University

112272

ABS-I-WB-G

Directions: Section I

This section contains statements about ideas which other Whites have about Blacks. Circle or fill in the answer sheet number that indicates how other Whites compare Blacks with themselves. Please answer all questions.

Other Whites believe the following things about Blacks as compared to Whites:

1. Blacks can be trusted with money

    1. less than Whites
    2. about the same as Whites
    3. more than Whites

2. Black families are closely knit

    1. less often than White ones
    2. about as often as White ones
    3. more often than White ones

3. Blacks' intellectual ability is

    1. less than Whites'
    2. about the same as Whites'
    3. more than Whites'

4. Blacks desire a higher education

    1. less often than Whites
    2. about as often as Whites
    3. more often than Whites

5. Blacks help their neighbors

    1. less than Whites do
    2. about the same as Whites do
    3. more than Whites do

6. Black neighborhoods are safe

    1. less often than White ones
    2. about as often as White ones
    3. more often than White ones

7. Blacks obey job rules and regulations

    1. less than Whites
    2. about the same as Whites
    3. more than Whites

8. Whites enjoy working with Blacks

    1. less than Blacks do with Whites
    2. about the same as Blacks
    3. more than Blacks do with Whites

Other Whites believe the following things about Blacks as compared to Whites:

9. Blacks resist arrest

   1. more than Whites
   2. about the same as Whites
   3. less than Whites

10. Blacks are victims of "police brutality"

   1. more than Whites
   2. about the same as Whites
   3. less than Whites

11. Blacks misuse trial-by-jury

   1. more often than Whites
   2. about as often as Whites
   3. less often than Whites

12. Whites vote for Black candidates for public office

   1. less than Blacks do for Whites
   2. about the same as Blacks do for Whites
   3. more than Blacks do for Whites

13. Blacks desire draft deferments

   1. more often than Whites
   2. about as often as Whites
   3. less often as Whites

14. Blacks are careful with their weapons

   1. less often than Whites
   2. about as often as Whites
   3. more often than Whites

ABS-II-WB-G

Directions: Section II

This section contains statements about things which most Whites generally believe others would experience when interacting with Blacks. Please choose the answer that indicates what you think most others believe about Blacks.

Most Whites generally believe the following about interacting with Blacks:

15. Whites believe they can trust Blacks with money

    1. disagree
    2. uncertain
    3. agree

16. Whites believe that Black families are as closely knit as their own

    1. disagree
    2. uncertain
    3. agree

17. Whites believe the intellectual ability of Blacks is equal to theirs

    1. disagree
    2. uncertain
    3. agree

18. Whites believe they want to do their study or school work with Blacks

    1. disagree
    2. uncertain
    3. agree

19. Blacks like to help their neighbors

    1. less than Whites do
    2. about the same
    3. more than Whites do

20. Whites believe that Black neighborhoods are safe for Whites

    1. disagree
    2. uncertain
    3. agree

21. Whites believe Blacks obey job rules and regulations as much as they do

    1. disagree
    2. uncertain
    3. agree

Most Whites generally believe the following about interacting with Blacks:

22. Whites believe they enjoy working with Blacks

    1. disagree
    2. uncertain
    3. agree

23. Blacks believe in resisting arrest from White policemen

    1. agree
    2. uncertain
    3. disagree

24. Whites believe that Blacks are the victims of "police brutality" from Whites

    1. agree
    2. uncertain
    3. disagree

25. Whites usually use trial-by-jury fairly when they deal with Blacks

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

26. For Whites to vote with Blacks for Black candidates for public office

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

27. For Whites to be given draft deferments more than Blacks

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

28. For Blacks to be as careful with their weapons as Whites are

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

ABS-III-WB-G

Directions: Section III

This section contains statements of the right or wrong way of behaving or acting toward Blacks. You are asked to indicate what you yourself believe others think should be done with respect to Blacks.

In respect to Blacks, what do you believe others think is right or wrong?

29. To trust Blacks with money is

1. usually wrong
2. undecided
3. usually right

30. To expect Black families to be as closely knit as White ones is

1. usually wrong
2. undecided
3. usually right

31. To expect Blacks' intellectual ability to be the same as Whites is

1. usually wrong
2. undecided
3. usually right

32. To expect Blacks to desire a higher education as much as Whites do is

1. usually wrong
2. undecided
3. usually right

33. To expect Whites to help Black neighbors is

1. usually wrong
2. undecided
3. usually right

34. To expect Whites to believe that Black neighborhoods are safe for them is

1. usually wrong
2. undecided
3. usually right

35. To expect Blacks to obey job rules and regulations the same as Whites do is

1. usually wrong
2. undecided
3. usually right

ABS-III-WB-G

In respect to Blacks, what do you believe others think is right or wrong:

36. To expect Whites to enjoy working with Blacks is

1. usually wrong
2. undecided
3. usually right

37. To expect Blacks to resist arrest from White officials is

1. usually right
2. undecided
3. usually wrong

38. To expect Blacks to be the victims of "police brutality" from Whites is

1. usually right
2. undecided
3. usually wrong

39. To expect Whites to misuse trial-by-jury when they deal with Blacks is

1. usually right
2. undecided
3. usually wrong

40. To expect Whites to vote with Blacks for Black candidates for public office is

1. usually wrong
2. undecided
3. usually right

41. To expect Blacks to be given draft deferments equally with Whites is

1. usually wrong
2. undecided
3. usually right

42. To expect Blacks to be as careful with their weapons as Whites are is

1. usually wrong
2. undecided
3. usually right

ABS-IV-WB-G

Directions: Section IV

This section contains statements about how you think you would act toward Blacks. Choose the answer that indicates how you think you would act.

In respect to a Black person would you yourself:

43. I would trust Blacks with money

1. no
2. undecided
3. yes

44. I would want my family to be as closely knit as Black families are

1. no
2. undecided
3. yes

45. I would want my intellectual ability to be the same as that of Blacks

1. no
2. undecided
3. yes

46. I would want to have the same desire Blacks do for a higher education

1. no
2. undecided
3. yes

47. I would help Black neighbors

1. no
2. undecided
3. yes

48. I would want White neighborhoods to be as safe as I think Black ones are

1. no
2. undecided
3. yes

49. I would obey job rules and regulations the same as Blacks

1. no
2. undecided
3. yes

ABS-IV-WB-G

In respect to a Black person would you yourself:

50. I would enjoy working with Blacks

1. no
2. undecided
3. yes

51. I would resist arrest if arrested by Blacks

1. yes
2. undecided
3. no

52. I would expect "police brutality" from Blacks

1. yes
2. undecided
3. no

53. Would you use trial-by-jury equally when dealing with Blacks?

1. no
2. undecided
3. yes

54. Would you vote for a Black candidate for public office?

1. no
2. undecided
3. yes

55. Would you want Whites to be given draft deferments as much as Blacks?

1. no
2. undecided
3. yes

56. Would you be as careful with weapons as you think Blacks are?

1. no
2. undecided
3. yes

ABS-V-WB-G

Directions: Section V

This section concerns actual feelings that you yourself may have about Blacks. You are asked to indicate how you feel about the following statements.

How do you actually feel toward Blacks:

57. When Whites trust Blacks with money I feel

1. bad
2. indifferent
3. good

58. When White families are as closely knit as I think Black families are I feel

1. bad
2. indifferent
3. good

59. When Blacks' intellectual ability is the same as Whites I feel

1. bad
2. indifferent
3. happy

60. When Blacks desire a higher education as much as Whites do, I feel

1. bad
2. indifferent
3. good

61. When Whites help Black neighbors I feel

1. bad
2. indifferent
3. good

62. When Whites are safe in Black neighborhoods, I feel

1. bad
2. indifferent
3. good

63. When Blacks obey job rules and regulations the same as Whites, I feel

1. dissatisfied
2. indifferent
3. satisfied

ABS-V-WB-G

How do you actually feel toward Blacks:

64. When Whites enjoy working with Blacks I feel

1. bad
2. indifferent
3. good

65. When Blacks resist arrest the same as Whites, I feel

1. dissatisfied
2. indifferent
3. satisfied

66. When Blacks use "police brutality" the same as Whites do, I feel

1. bad
2. indifferent
3. good

67. When Whites misuse trial-by-jury in relation to Blacks, I feel

1. happy
2. indifferent
3. angry

68. When Whites vote for Black candidates for public office, I feel

1. bad
2. indifferent
3. good

69. When Blacks are given draft deferments as much as Whites, I feel

1. dissatisfied
2. indifferent
3. satisfied

70. When Blacks are as careful with their weapons as Whites are, I feel

1. dissatisfied
2. indifferent
3. satisfied

ABS-VI-WB-G

Directions: Section VI

This section concerns actual experiences you have had with Blacks. Try to answer the following questions from the knowledge of your own experience. If you have had no experience or contact with Blacks, omit questions 71-84 and begin again at question number 85. If you have had any experience or contact with Blacks answer all of the following questions.

Experiences or contacts with Blacks:

71. I have trusted Blacks with money

1. no
2. uncertain
3. yes

72. I have seen that Black families are as closely knit as White ones

1. no
2. uncertain
3. yes

73. The intellectual ability of Blacks is equal to mine

1. no
2. uncertain
3. yes

74. The Blacks I know wanted a higher education as much as I did

1. no
2. uncertain
3. yes

75. I have helped a Black neighbor

1. no
2. uncertain
3. yes

76. I have felt safe when in Black neighborhoods

1. no
2. uncertain
3. yes

77. I have seen that Whites obey job rules and regulations when working with Blacks

1. no
2. uncertain
3. yes

ABS-VI-WB-G

Experiences or contacts with Blacks:

78. I have enjoyed working with Blacks

1. no
2. uncertain
3. yes

79. I have resisted arrest by Blacks

1. yes
2. uncertain
3. no

80. I have been the victim of "police brutality" from Blacks

1. yes
2. uncertain
3. no

81. I have seen Whites misuse trial-by-jury with Blacks

1. yes
2. uncertain
3. no

82. I have seen that Whites vote for Black candidates for public office

1. no
2. uncertain
3. yes

83. I have seen that Blacks are given draft deferments as much as Whites

1. no
2. uncertain
3. yes

84. I have seen that Blacks are as careful with their weapons as Whites

1. no
2. uncertain
3. yes

ATTITUDE BEHAVIOR SCALE - ABS-WB-D

This part of the questionnaire deals with many things. For the purpose of this study, the answers of all persons are important.

Part of the qeustionnaire 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 or marking the space on the IBM answer sheet.

85. Please indicate your sex.

    1. Female
    2. Male

86. Please indicate your age as follows:

    1. Under 20
    2. 21-30
    3. 31-40
    4. 41-50
    5. 51-over

87. What is your marital status?

    1. Married
    2. Single
    3. Divorced
    4. Widowed
    5. Separated

88. What is your religion?

1. I prefer not to answer
2. Catholic
3. Protestant
4. Jewish
5. Other

89. Please indicate level of education

1. First year university
2. Second year university
3. Third year university
4. Fourth year university
5. Graduate student

90. 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 whenever possible."

1. Strongly disagree
2. Slightly disagree
3. Slightly agree
4. Strongly agree

91. Family planning on birth control has been discussed by many people. What is your feeling about a married couple practicing birth control?

1. It is always wrong
2. It is usually wrong
3. It is probably all right
4. It is always right

92. The following questions have to do with kinds of experiences you have had with Blacks. If more than one experience applies, please choose the answer with the highest number.

1. I have read or studied about Blacks through reading, movies, lecture or observation.

2. A friend or relative is a Black person.

3. I have personally worked with Blacks as teacher, counselor, volunteer, child care, etc.

93. Considering all of the times you have talked, worked or in some other way had personal contact with Blacks about how much has it been altogether?

1. Only a few casual contacts.

2. Between one and three months.

3. Between three and six months.

4. Between six months and one year.

5. More than one year of contact.

94. When you have been in contact with Blacks, how easy for you, in general, would you say it would have been to have avoided being with them?

1. I have had no contact.

2. I could generally have avoided these personal contacts only at great cost or 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.

95. If you have ever worked with Blacks for personal gain (for example, for money or some other gain) what opportunities did you have (or do you have) to work at something else instead; that is, something else that was (is) acceptable to you as a job?

1. No such experience.

2. No other job available.

3. Other jobs available 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.

96. How have you generally felt about your experiences with Blacks?

1. no experience.
2. I definitely dislike it.
3. I did not like it very much.
4. I like it somewhat.
5. I definitely enjoyed it.

97. Which of the following do you think would have the greatest effect of reducing racial prejudice? Circle only one or mark only one on the IBM answer sheet.

1. Integration of schools.
2. Publicity campaigns to promote integration.
3. Fair employment legislation.
4. Open housing legislation.
5. Direct, personal contact between members of various racial groups.

98. How would you rate your own racial attitudes as compared to the average person?

1. Very much more prejudiced.
2. Somewhat more prejudiced.
3. About the same.
4. Somewhat less prejudiced.
5. Very much less prejudiced.

99. To which racial group do you belong?

1. Prefer not to answer.
2. White
3. Black
4. Oriental
5. Other

100. Where were you mainly reared or "brought up" in your youth (that is, up to age 21)?

1. country
2. country town
3. city suburb
4. city

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 or marking on the IBM answer sheet.

101. It should be possible to eliminate war once and for all

1. strongly disagree
2. disagree
3. agree
4. strongly agree

102. Success depends to a large part on luck and fate

1. strongly agree
2. agree
3. disagree
4. strongly disagree

103. Someday most of the mysteries of the world will be revealed by science

1. strongly disagree
2. disagree
3. agree
4. strongly agree

104. By improving industrial and agricultural methods, poverty can be eliminated

1. strongly disagree
2. disagree
3. agree
4. strongly agree

105. 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

106. 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

107. 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

108. With hard work anyone can succeed

1. strongly disagree
2. disagree
3. agree
4. strongly agree

109. Almost every present human problem will be solved in the future

1. strongly disagree
2. disagree
3. agree
4. strongly agree

APPENDIX B-2

ATTITUDE BEHAVIOR SCALE WN-G

ATTITUDE BEHAVIOR SCALE-WN-G

DIRECTIONS

This booklet contains statements of how people behave in certain situations or feel about certain things. You, yourself, or other White persons often behave in the same way toward Negroes. You also have some general ideas about yourself, about other White persons like you and about Negroes. Sometimes you feel or behave the same way toward everyone and sometimes you feel or behave differently toward Negroes.

This questionnaire has statements about ideas and about behavior. Each statement of this questionnaire is different from every other section, although some of the statements in each section are similar. Your answers in one section, therefore, may be the same as answers in another section, or your answers may differ from section to section. Here is a sample statement:

Sample I

Other Whites believe the following things about Negroes as compared to Whites:

1. Chance of Negroes being taller

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

If other Whites believe that Negroes have less chance than Whites to be taller, you should circle the number 1 as shown above or if you are using an IBM answer sheet make a heavy dark line on the answer sheet between the two lines after the number as follows:

1. 1 ▬ 2 ═ 3 ═ 4 ═ 5 ═

********** DO NOT PUT YOUR NAME ON THE BOOKLET **********

by: © Richard J. Hamersma
John E. Jordan
College of Education
Michigan State University

112272

ABS-I-WN-G

Directions: Section I

This section contains statements about ideas which other Whites have about Negroes. Circle or fill in the answer sheet number that indicates how other Whites compare Negroes with themselves. Please answer all questions.

Other Whites believe the following things about Negroes as compared to Whites:

1. Negroes can be trusted with money

   1. less than Whites
   2. about the same as Whites
   3. more than Whites

2. Negro families are closely knit

   1. less often than White ones
   2. about as often as White ones
   3. more often than White ones

3. Negroes' intellectual ability is

   1. less than Whites'
   2. about the same as Whites'
   3. more than Whites'

4. Negroes desire a higher education

   1. less often than Whites
   2. about as often as Whites
   3. more often than Whites

5. Negroes help their neighbors

   1. less than Whites do
   2. about the same as Whites do
   3. more than Whites do

6. Negro neighborhoods are safe

   1. less often than White ones
   2. about as often as White ones
   3. more often than White ones

7. Negroes obey job rules and regulations

   1. less than Whites
   2. about the same as Whites
   3. more than Whites

8. Whites enjoy working with Negroes

   1. less than Negroes do with Whites
   2. about the same as Negroes
   3. more than Negroes do with Whites

Other Whites believe the following things about Negroes as compared to Whites:

9. Negroes resist arrest

   1. more than Whites
   2. about the same as Whites
   3. less than Whites

10. Negroes are victims of "police brutality"

   1. more than Whites
   2. about the same as Whites
   3. less than Whites

11. Negroes misuse trial-by-jury

   1. more often than Whites
   2. about as often as Whites
   3. less often than Whites

12. Whites vote for Negro candidates for public office

   1. less than Negroes do for Whites
   2. about the same as Negroes do for Whites
   3. more than Negroes do for Whites

13. Negroes desire draft deferments

   1. more often than Whites
   2. about as often as Whites
   3. less often than Whites

14. Negroes are careful with their weapons

   1. less often than Whites
   2. about as often as Whites
   3. more often than Whites

ABS-II-WN-G

Directions: Section II

This section contains statements about things which most Whites generally believe others would experience when interacting with Negroes. Please choose the answer that indicates what you think most others believe about Negroes.

Most Whites generally believe the following about interacting with Negroes:

15. Whites believe they can trust Negroes with money

1. disagree
2. uncertain
3. agree

16. Whites believe that Negro families are as closely knit as their own

1. disagree
2. uncertain
3. agree

17. Whites believe the intellectual ability of Negroes is equal to theirs

1. disagree
2. uncertain
3. agree

18. Whites believe they want to do their study or school work with Negroes

1. disagree
2. uncertain
3. agree

19. Negroes like to help their neighbors

1. less than Whites do
2. about the same
3. more than Whites do

20. Whites believe that Negro neighborhoods are safe for Whites

1. disagree
2. uncertain
3. agree

21. Whites believe Negroes obey job rules and regulations as much as they do

1. disagree
2. uncertain
3. agree

ABS-II-WN-G

Most Whites generally believe the following about interacting with Negroes:

22. Whites believe they enjoy working with Negores

1. disagree
2. uncertain
3. agree

23. Negroes believe in resisting arrest from White policemen

1. agree
2. uncertain
3. disagree

24. Whites believe that Negroes are the victims of "police brutality" from Whites

1. agree
2. uncertain
3. disagree

25. Whites usually use trial-by-jury fairly when they deal with Negroes

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

26. For Whites to vote with Negroes for Negro candidates for public office

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

27. For Whites to be given draft deferements more than Negroes

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

28. For Negroes to be as careful with their weapons as Whites are

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

ABS-III-WN-G

Directions: Section III

This section contains statements of the right or wrong way of behaving or acting toward Negroes. You are asked to indicate what you yourself believe others think should be done with respect to Negroes.

In respect to Negroes, what do you believe others think is right or wrong:

29. To trust Negroes with money is

1. usually wrong
2. undecided
3. usually right

30. To expect Negro families to be as closely knit as White ones is

1. usually wrong
2. undecided
3. usually right

31. To expect Negroes' intellectual ability to be the same as Whites is

1. usually wrong
2. undecided
3. usually right

32. To expect Negroes to desire a higher education as much as Whites do is

1. usually wrong
2. undecided
3. usually right

33. To expect Whites to help Negro neighbors is

1. usually wrong
2. undecided
3. usually right

34. To expect Whites to believe that Negro neighborhoods are safe for them is

1. usually wrong
2. undecided
3. usually right

35. To expect Negroes to obey job rules and regulations the same as Whites do is

1. usually wrong
2. undecided
3. usually right

In respect to Negroes, what do you believe others think is right or wrong:

36. To expect Whites to enjoy working with Negroes is

1. usually wrong
2. undecided
3. usually right

37. To expect Negroes to resist arrest from White officials is

1. usually right
2. undecided
3. usually wrong

38. To expect Negroes to be the victims of "police brutality" from Whites is

1. usually right
2. undecided
3. usually wrong

39. To expect Whites to misuse trial-by-jury when they deal with Negroes is

1. usually right
2. undecided
3. usually wrong

40. To expect Whites to vote with Negroes for Negro candidates for public office is

1. usually wrong
2. undecided
3. usually right

41. To expect Negroes to be given draft deferments equally with Whites is

1. usually wrong
2. undecided
3. usually right

42. To expect Negroes to be as careful with their weapons as Whites are is

1. usually wrong
2. undecided
3. usually right

ABS-IV-WN-G

Directions: Section IV

This section contains statements about how you think you would act toward Negroes. Choose the answer that indicates how you think you would act.

In respect to a Negro person would you yourself:

43. I would trust Negroes with money

1. no
2. undecided
3. yes

44. I would want my family to be as closely knit as Negro families are

1. no
2. undecided
3. yes

45. I would want my intellectual ability to be the same as that of Negroes

1. no
2. undecided
3. yes

46. I would want to have the same desire Negroes do for a higher education

1. no
2. undecided
3. yes

47. I would help Negro neighbors

1. no
2. undecided
3. yes

48. I would want White neighborhoods to be as safe as I think Negro ones are

1. no
2. undecided
3. yes

49. I would obey job rules and regulations the same as Negroes

1. no
2. undecided
3. yes

ABS-IV-WN-G

In respect to a Negro person would you yourself:

50. I would enjoy working with Negroes

1. no
2. undecided
3. yes

51. I would resist arrest if arrested by Negroes

1. yes
2. undecided
3. no

52. I would expect "police brutality" from Negroes

1. yes
2. undecided
3. no

53. Would you use trial-by-jury equally when dealing with Negroes?

1. no
2. undecided
3. yes

54. Would you vote for a Negro candidate for public office?

1. no
2. undecided
3. yes

55. Would you want Whites to be given draft deferments as much as Negroes?

1. no
2. undecided
3. yes

56. Would you be as careful with weapons as you think Negroes are?

1. no
2. undecided
3. yes

ABS-V-WN-G

Directions: Section V

This section concerns actual feelings that you yourself may have about Negroes. You are asked to indicate how you feel about the following statements.

How do you actually feel toward Negroes:

57. When Whites trust Negroes with money I feel

1. bad
2. indifferent
3. good

58. When White families are as closely knit as I think Negro families are I feel

1. bad
2. indifferent
3. good

59. When Negroes' intellectual ability is the same as Whites I feel

1. bad
2. indifferent
3. happy

60. When Negroes desire a higher education as much as Whites do, I feel

1. bad
2. indifferent
3. good

61. When Whites help Negro neighbors I feel

1. bad
2. indifferent
3. good

62. When Whites are safe in Negro neighborhoods, I feel

1. bad
2. indifferent
3. good

63. When Negroes obey job rules and regulations the same as Whites, I feel

1. dissatisfied
2. indifferent
3. satisfied

ABS-V-WN-G

How do you actually feel toward Negroes:

64. When Whites enjoy working with Negroes I feel

1. bad
2. indifferent
3. good

65. When Negroes resist arrest the same as Whites, I feel

1. dissatisfied
2. indifferent
3. satisfied

66. When Negroes use "police brutality" the same as Whites do, I feel

1. bad
2. indifferent
3. good

67. When Whites misuse trial-by-jury in relation to Negroes, I feel

1. happy
2. indifferent
3. angry

68. When Whites vote for Negro candidates for public office, I feel

1. bad
2. indifferent
3. good

69. When Negroes are given draft deferments as much as Whites, I feel

1. dissatisfied
2. indifferent
3. satisfied

70. When Negroes are as careful with their weapons as Whites are, I feel

1. dissatisfied
2. indifferent
3. satisfied

ABS-VI-WN-G

Directions: Section VI

This section concerns actual experiences you have had with Negroes. Try to answer the following questions from the knowledge of your own experience. If you have had no experience or contact with Negroes, omit questions 71-84 and begin again at question number 85. If you have had any experience or contact with Negroes answer all of the following questions.

Experiences or contacts with Negroes:

71. I have trusted Negroes with money

1. no
2. uncertain
3. yes

72. I have seen that Negro families are as closely knit as White ones

1. no
2. uncertain
3. yes

73. The intellectual ability of Negroes is equal to mine

1. no
2. uncertain
3. yes

74. The Negroes I know wanted a higher education as much as I did

1. no
2. uncertain
3. yes

75. I have helped a Negro neighbor

1. no
2. uncertain
3. yes

76. I have felt safe when in Negro neighborhoods

1. no
2. uncertain
3. yes

77. I have seen that Whites obey job rules and regulations when working with Negroes

1. no
2. uncertain
3. yes

ABS-VI-WN-G

Experiences or contacts with Negroes:

78. I have enjoyed working with Negroes

1. no
2. uncertain
3. yes

69. I have resisted arrest by Negroes

1. yes
2. uncertain
3. no

80. I have been the victim of "police brutality" from Negroes

1. yes
2. uncertain
3. no

81. I have seen Whites misuse trial-by-jury with Negroes

1. yes
2. uncertain
3. no

82. I have seen that Whites vote for Negro candidates for public office

1. no
2. uncertain
3. yes

83. I have seen that Negroes are given draft deferments as much as Whites

1. no
2. uncertain
3. yes

84. I have seen that Negroes are as careful with their weapons as Whites

1. no
2. uncertain
3. yes

ATTITUDE BEHAVIOR SCALE - ABS-WN-D

This part of the questionnaire 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 or marking the space on the IBM answer sheet.

85. Please indicate your sex.

    1. Female
    2. Male

86. Please indicate you age as follows:

    1. Under 20
    2. 21-30
    3. 31-40
    4. 41-50
    5. 51-over

87. What is your marital status?

    1. Married
    2. Single
    3. Divorced
    4. Widowed
    5. Separated

88. What is your religion?

1. I prefer not to answer
2. Catholic
3. Protestant
4. Jewish
5. Other

89. Please indicate level of education

1. First year university
2. Second year university
3. Third year university
4. Fourth year university
5. Graduate student

90. 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 whenever possible."

1. Strongly disagree
2. Slightly disagree
3. Slightly agree
4. Strongly agree

91. Family planning on birth control has been discussed by many people. What is your feeling about a married couple practicing birth control?

1. It is always wrong
2. It is usually wrong
3. It is probably all right
4. It is always right

92. The following questions have to do with kinds of experiences you have had with Negroes. If more than one experience applies, please choose the answer with the highest number.

1. I have read or studied about Negroes through reading, movies, lecture or observation.

2. A friend or relative is a Negro person.

3. I have personally worked with Negroes as teacher, counselor, volunteer, child care, etc.

93. Considering all of the times you have talked, worked or in some other way had personal contact with Negroes about how much has it been altogether?

1. Only a few casual contacts.

2. Between one and three months.

3. Between three and six months.

4. Between six months and one year.

5. More than one year of contact.

94. When you have been in contact with Negroes, how easy for you, in general, would you say it would have been to have avoided being with them?

1. I have had no contact.

2. I could generally have avoided these personal contacts only at great cost or 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.

95. If you have ever worked with Negroes for personal gain (for example, for money or some other gain) what opportunities did you have (or do you have) to work at something else instead; that is, something else that was (is) acceptable to you as a job?

1. No such experience.

2. No other job available.

3. Other jobs available 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.

96. How have you generally felt about your experiences with Negroes?

1. No experience.
2. I definitely dislike it.
3. I did not like it very much.
4. I like it somewhat.
5. I definitely enjoyed it.

97. Which of the following do you think would have the greatest effect of reducing racial prejudice? Circle only one or mark one on the IBM answer sheet.

1. Integration of schools.
2. Publicity campaigns to promote integration.
3. Fair employment legislation.
4. Open housing legislation.
5. Direct, personal contact between members of various racial groups.

98. How would you rate your own racial attitudes as compared to the average person?

1. Very much more prejudiced.
2. Somewhat more prejudiced.
3. About the same.
4. Somewhat less prejudiced.
5. Very much less prejudiced.

99. To which racial group do you belong?

1. Prefer not to answer.
2. White
3. Black
4. Oriental
5. Other

100. Where were you mainly reared or "brought up" in your youth (that is, up to age 21)?

1. country

2. country town

3. city suburb

4. city

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 or marking on the IBM answer sheet.

101. It should be possible to eliminate war once and for all

1. strongly disagree
2. disagree
3. agree
4. strongly agree

102. Success depends to a large part on luck and fate

1. strongly agree
2. agree
3. disagree
4. strongly disagree

103. Someday most of the mysteries of the world will be revealed by science

1. strongly disagree
2. disagree
3. agree
4. strongly agree

104. By improving industrial and agricultural methods, poverty can be eliminated in the world

1. strongly disagree
2. disagree
3. agree
4. strongly agree

105. 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

106. 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

107. 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

108. With hard work anyone can succeed

1. strongly disagree
2. disagree
3. agree
4. strongly agree

109. Almost every present human problem will be solved in the future

1. strongly disagree
2. disagree
3. agree
4. strongly agree

APPENDIX B-3

ATTITUDE BEHAVIOR SCALE BW-G

ATTITUDE BEHAVIOR SCALE-BW-G

DIRECTIONS

This booklet contains statements of how people behave in certain situations or feel about certain things. You, yourself, or other Black persons often behave in the same way toward Whites. You also have some general ideas about yourself, about other Black persons like you and about Whites. Sometimes you feel or behave the same way toward everyone and sometimes you feel or behave differently toward Whites.

This questionnaire has statements about ideas and about behavior. Each statement of this questionnaire is different from every other section, although some of the statements in each section are similar. Your answers in one section, therefore, may be the same as answers in another section, or your answers may differ from section to section. Here is a sample statement:

Sample I

Other Blacks believe the following things about Whites as compared to Blacks:

1. Chance of Whites being taller

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

If other Blacks believe that Whites have less chance than Blacks to be taller, you should circle the number 1 as shown above or if you are using an IBM answer sheet make a heavy dark line on the answer sheet between the two lines after the number as follows:

1. 1 ■■■ 2 --- 3 --- 4 --- 5 ---

********** DO NOT PUT YOUR NAME ON THE BOOKLET **********

by: © Richard J. Hamersma
John E. Jordan
College of Education
Michigan State University

112272

ABS-I-BW-G

Directions: Section I

This section contains statements about ideas which other Blacks have about Whites. Circle or fill in the answer sheet number that indicates how other Blacks compare Whites with themselves. Please answer all questions.

Other Blacks believe the following things about Whites as compared to Blacks:

1. Whites can be trusted with money

   1. less than Blacks
   2. about the same as Blacks
   3. more than Blacks

2. White families are closely knit

   1. less often than Black ones
   2. about as often as Black ones
   3. more often than Black ones

3. Whites' intellectual ability is

   1. less than Blacks'
   2. about the same as Blacks'
   3. more than Blacks'

4. Whites desire a higher education

   1. less often than Blacks
   2. about as often as Blacks
   3. more often than Blacks

5. Whites help their neighbors

   1. less than Blacks do
   2. about the same as Blacks do
   3. more than Blacks do

6. White neighborhoods are safe

   1. less often than Black ones
   2. about as often as Black ones
   3. more often than Black ones

7. Whites obey job rules and regulations

   1. less than Blacks
   2. about the same as Blacks
   3. more than Blacks

8. Blacks enjoy working with Whites

   1. less than Whites do with Blacks
   2. about the same as Whites
   3. more than Whites do with Blacks

ABS-I-BW-G

Other Blacks believe the following things about Whites as compared to Blacks:

9. Whites resist arrest

   1. more than Blacks
   2. about the same as Blacks
   3. less than Blacks

10. Whites are victims of "police brutality"

   1. more than Blacks
   2. about the same as Blacks
   3. less than Blacks

11. Whites misuse trial-by-jury

   1. more often than Blacks
   2. about as often as Blacks
   3. less often than Blacks

12. Blacks vote for White candidates for public office

   1. less than Whites do for Blacks
   2. about the same as Whites do for Blacks
   3. more than Whites do for Blacks

13. Whites desire draft deferments

   1. more often than Blacks
   2. about as often as Blacks
   3. less often than Blacks

14. Whites are careful with their weapons

   1. less often than Blacks
   2. about as often as Blacks
   3. more often than Blacks

ABS-II-BW-G

Directions: Section II

This section contains statements about things which most Blacks generally believe others would experience when interacting with Whites. Please choose the answer that indicates what you think most others believe about Whites.

Most Blacks generally believe the following about interacting with Whites:

15. Blacks believe they can trust Whites with money

    1. disagree
    2. uncertain
    3. agree

16. Blacks believe that White families are as closely knit as their own

    1. disagree
    2. uncertain
    3. agree

17. Blacks believe the intellectual ability of Whites is equal to theirs

    1. disagree
    2. uncertain
    3. agree

18. Blacks believe they want to do their study or school work with Whites

    1. disagree
    2. uncertain
    3. agree

19. Whites like to help their neighbors

    1. less than Blacks do
    2. about the same
    3. more than Blacks do

20. Blacks believe that White neighborhoods are safe for Blacks

    1. disagree
    2. uncertain
    3. agree

21. Blacks believe Whites obey job rules and regulations as much as they do

    1. disagree
    2. uncertain
    3. agree

ABS-II-BW-G

Most Blacks generally believe the following about interacting with Whites:

22. Blacks believe they enjoy working with Whites

    1. disagree
    2. uncertain
    3. agree

23. Whites believe in resisting arrest from Black policemen

    1. agree
    2. uncertain
    3. disagree

24. Blacks believe that Whites are the victims of "police brutality" from Blacks

    1. agree
    2. uncertain
    3. disagree

25. Blacks usually use trial-by-jury fairly when they deal with Whites

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

26. For Blacks to vote with Whites for White candidates for public office

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

27. For Blacks to be given draft deferments more than Whites

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

28. For Whites to be as careful with their weapons as Blacks are

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

ABS-III-BW-C

Directions: Section III

This section contains statements of the right or wrong way of behaving or acting toward Whites. You are asked to indicate what you yourself believe others think should be done with respect to Whites.

In respect to Whites, what do **you believe others think is right** or wrong:

29. To trust Whites with money is

    1. usually wrong
    2. undecided
    3. usually right

30. To expect White families to be as closely knit as Black ones is

    1. usually wrong
    2. undecided
    3. usually right

31. To expect Whites' intellectual ability to be the same as Blacks is

    1. usually wrong
    2. undecided
    3. usually right

32. To expect Whites to desire a higher education as much as Blacks do is

    1. usually wrong
    2. undecided
    3. usually right

33. To expect Blacks to help White neighbors is

    1. usually wrong
    2. undecided
    3. usually right

34. To expect Blacks to believe that White neighborhoods are safe for them is

    1. usually wrong
    2. undecided
    3. usually right

35. To expect Whites to obey job rules and regulations the same as Blacks do is

    1. usually wrong
    2. undecided
    3. usually right

ABS-III-BW-G

In respect to Whites, what do you believe others think is right or wrong:

36. To expect Blacks to enjoy working with Whites is

1. usually wrong
2. undecided
3. usually right

37. To expect Whites to resist arrest from Black officials is

1. usually right
2. undecided
3. usually wrong

38. To expect Whites to be the victims of "police brutality" from Blacks is

1. usually right
2. undecided
3. usually wrong

39. To expect Blacks to misuse trial-by-jury when they deal with Whites is

1. usually right
2. undecided
3. usually wrong

40. To expect Blacks to vote with Whites for White candidates for public office is

1. usually wrong
2. undecided
3. usually right

41. To expect Whites to be given draft deferments equally with Blacks is

1. usually wrong
2. undecided
3. usually right

42. To expect Whites to be as careful with their weapons as Blacks are is

1. usually wrong
2. undecided
3. usually right

Directions: Section IV

This section contains statements about how you think you would act toward Whites. Choose the answer that indicates how you think you would act.

In respect to a White person would you yourself:

43. I would trust Whites with money

1. no
2. undecided
3. yes

44. I would want my family to be as closely knit as White families are

1. no
2. undecided
3. yes

45. I would want my intellectual ability to be the same as that of Whites

1. no
2. undecided
3. yes

46. I would want to have the same desire Whites do for a higher education

1. no
2. undecided
3. yes

47. I would help White neighbors

1. no
2. undecided
3. yes

48. I would want Black neighborhoods to be as safe as I think White ones are

1. no
2. undecided
3. yes

49. I would obey job rules and regulations the same as Whites

1. no
2. undecided
3. yes

ABS-IV-BW-G

In respect to a White person would you **yourself**:

50. I would enjoy working with Whites

1. no
2. undecided
3. yes

51. I would resist arrest if arrested by Whites

1. yes
2. undecided
3. no

52. I would expect "police brutality" from Whites

1. yes
2. undecided
3. no

53. Would you use trial-by-jury equally when dealing with Whites?

1. no
2. undecided
3. yes

54. Would you vote for a White candidate for public office?

1. no
2. undecided
3. yes

55. Would you want Blacks to be given draft deferments as much as Whites?

1. no
2. undecided
3. yes

56. Would you be as careful with weapons as you think Whites are?

1. no
2. undecided
3. yes

ABS-V-BW-G

Directions: Section V

This section concerns actual feelings that you yourself may have about Whites. You are asked to indicate how you feel about the following statements.

How do you actually feel toward Whites:

57. When Blacks trust Whites with money I feel

1. bad
2. indifferent
3. good

58. When Black families are as closely knit as I think White families are I feel

1. bad
2. indifferent
3. good

59. When Whites' intellectual ability is the same as Blacks I feel

1. bad
2. indifferent
3. happy

60. When Whites desire a higher education as much as Blacks do, I feel

1. bad
2. indifferent
3. good

61. When Blacks help White neighbors I feel

1. bad
2. indifferent
3. good

62. When Blacks are safe in White neighborhoods, I feel

1. bad
2. indifferent
3. good

63. When Whites obey job rules and regulations the same as Blacks, I feel

1. dissatisfied
2. indifferent
3. satisfied

ABS-V-BW-G

How do you actually feel toward Whites:

64. When Blacks enjoy working with Whites I feel

1. bad
2. indifferent
3. good

65. When Whites resist arrest the same as Blacks, I feel

1. dissatisfied
2. indifferent
3. satisfied

66. When Whites use "police brutality" the same as Blacks do, I feel

1. bad
2. indifferent
3. good

67. When Blacks misuse trial-by-jury in relation to Whites, I feel

1. happy
2. indifferent
3. angry

68. When Blacks vote for White candidates for public office, I feel

1. bad
2. indifferent
3. good

69. When Whites are given draft deferments as much as Blacks, I feel

1. dissatisfied
2. indifferent
3. satisfied

70. When Whites are as careful with their weapons as Blacks are, I feel

1. dissatisfied
2. indifferent
3. satisfied

Directions: Section VI

This section concerns actual experiences you have had with Whites. Try to answer the following questions from the knowledge of your own experience. If you have had no experience or contact with Whites, omit questions 71-84 and begin again at question number 85. If you have had any experience or contact with Whites answer all of the following questions.

Experiences or contacts with Whites:

71. I have trusted Whites with money

1. no
2. uncertain
3. yes

72. I have seen that White families are as closely knit as Black ones

1. no
2. uncertain
3. yes

73. The intellectual ability of Whites is equal to mine

1. no
2. uncertain
3. yes

74. The Whites I know wanted a higher education as much as I did

1. no
2. uncertain
3. yes

75. I have helped a White neighbor

1. no
2. uncertain
3. yes

76. I have felt safe when in White neighborhoods

1. no
2. uncertain
3. yes

77. I have seen that Blacks obey job rules and regulations when working with Whites

1. no
2. uncertain
3. yes

ABS-VI-BW-G

Experience or contacts with Whites:

78. I have enjoyed working with Whites

1. no
2. uncertain
3. yes

79. I have resisted arrest by Whites

1. yes
2. uncertain
3. no

80. I have been the victim of "police brutality" from Whites

1. yes
2. uncertain
3. no

81. I have seen Blacks misuse trial-by-jury with Whites

1. yes
2. uncertain
3. no

82. I have seen that Blacks vote for White candidates for public office

1. no
2. uncertain
3. yes

83. I have seen that Whites are given draft deferments as much as Blacks

1. no
2. uncertain
3. yes

84. I have seen that Whites are as careful with their weapons as Blacks

1. no
2. uncertain
3. yes

ATTITUDE BEHAVIOR SCALE - ABS-BW-D

This part of the questionnaire 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 or marking the paace on the IBM answer sheet.

85. Please indicate your sex.

    1. Female
    2. Male

86. Please indicate your age as follows:

    1. Under 20
    2. 21-30
    3. 31-40
    4. 41-50
    5. 51-over

87. What is your marital status?

    1. Married
    2. Single
    3. Divorced
    4. Widowed
    5. Separated

88. What is your religion?

1. I prefer not to answer
2. Catholic
3. Protestant
4. Jewish
5. Other

89. Please indicate level of education

1. First year university
2. Second year university
3. Third year university
4. Fourth year university
5. Graduate student

90. 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 whenever possible."

1. Strongly disagree
2. Slightly disagree
3. Slightly agree
4. Strongly agree

91. Family planning on birth control has been discussed by many people. What is your feeling about a married couple practicing birth control?

1. It is always wrong
2. It is usually wrong
3. It is probably all right
4. It is always right

92. The following questions have to do with kinds of experiences you have had with Whites. If more than one experience applies, please choose the answer with the highest number.

1. I have read or studied about Whites through reading, movies, lecture or observation.

2. A friend or relative is a White person.

3. I have personally worked with Whites as a teacher, counselor, volunteer, child care, etc.

93. Considering all of the times you have talked, worked or in some other way had personal contact with Whites, about how much has it been altogether?

1. Only a few casual contacts.

2. Between one and three months.

3. Between three and six months.

4. Between six months and one year.

5. More than one year of contact.

94. When you have been in contact with Whites, how easy for you, in general, would you say it would have been to have avoided being with them?

1. I have had no 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.

95. If you have ever worked with Whites for personal gain (for example, for money or some other gain) what opportunities did you have (or do you have) to work at something else instead; that is, something else that was (is) acceptable to you as a job?

1. No such experience.

2. No other job available.

3. Other jobs available 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.

96. How have you generally felt about your experiences with Whites?

1. No experience.
2. I definitely dislike it.
3. I did not like it very much.
4. I like it somewhat.
5. I definitely enjoyed it.

97. Which of the following do you think would have the greatest effect of reducing racial prejudice? Circle only on or mark only one on the IBM answer sheet.

1. Integration of schools.
2. Publicity campaigns to promote integration.
3. Fair employment legislation.
4. Open housing legislation.
5. Direct, personal contact between members of various racial groups.

98. How would you rate your own racial attitudes as compared to the average person?

1. Very much more prejudiced.
2. Somewhat more prejudiced.
3. About the same.
4. Somewhat less prejudiced.
5. Very much less prejudiced.

99. To which racial group to you belong?

1. Prefer not to answer.
2. White
3. Black
4. Oriental
5. Other

100. Where were you mainly reared or "brought up" in your youth (that is up to age 21)?

1. Country
2. Country town
3. City suburb
4. City

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 or marking on the IBM answer sheet.

101. It should be possible to eliminate war once and for all

1. strongly disagree
2. disagree
3. agree
4. strongly agree

102. Success depends to a large part on luck and fate

1. strongly agree
2. agree
3. disagree
4. strongly disagree

103. Someday most of the mysteries of the world will be revealed by science

1. strongly disagree
2. disagree
3. agree
4. strongly agree

104. By improving industrial and agricultural methods, poverty can be eliminated in the world

1. strongly disagree
2. disagree
3. agree
4. strongly agree

105. 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

106. 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

107. 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

108. With hard work anyone can succeed

1. strongly disagree
2. disagree
3. agree
4. strongly agree

109. Almost every present human problem will be solved in the future

1. strongly disagree
2. disagree
3. agree
4. strongly agree

APPENDIX C

SEMANTIC DIFFERENTIAL

SEMANTIC DIFFERENTIAL

DIRECTIONS

The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this scale, please make your judgments on the basis of what these things mean to you. On each page, you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.

Here is how you are to use these scales: If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your checkmark as follows:

fair __X__:_____:_____:_____:_____:_____:_____unfair

or

fair_____:_____:_____:_____:_____:_____:__X__unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong_____:__X__:_____:_____:_____:_____:_____weak

or

strong_____:_____:_____:_____:_____:__X__:_____weak

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active____:____:_X_:____:____:____:____passive

or

active____:____:____:____:_X_:____:____passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the think you're judging. If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space:

safe____:____:____:_X_:____:____:____dangerous

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries:

This Not this

____:____:____:_X_:____X____:____

(2) Be sure you check every scale for every concept--do not omit any.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the test. Make each item a separate and independent judgment. Work at a fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

FRIEND

kind	:	:	:	:	:	:	cruel
thick	:	:	:	:	:	:	thin
clean	:	:	:	:	:	:	dirty
cold	:	:	:	:	:	:	hot
bad	:	:	:	:	:	:	good
strong	:	:	:	:	:	:	weak
honest	:	:	:	:	:	:	dishonest
active	:	:	:	:	:	:	passive
unpleasant	:	:	:	:	:	:	pleasant
small	:	:	:	:	:	:	large
worthless	:	:	:	:	:	:	valuable
slow	:	:	:	:	:	:	fast
fair	:	:	:	:	:	:	unfair
soft	:	:	:	:	:	:	hard
cowardly	:	:	:	:	:	:	brave
sharp	:	:	:	:	:	:	dull
friendly	:	:	:	:	:	:	unfriendly
heavy	:	:	:	:	:	:	light
unsuccessful	:	:	:	:	:	:	successful
violent	:	:	:	:	:	:	moderate

ENEMY

kind	____	____	____	____	____	____	cruel
thick	____	____	____	____	____	____	thin
clean	____	____	____	____	____	____	dirty
cold	____	____	____	____	____	____	hot
bad	____	____	____	____	____	____	good
strong	____	____	____	____	____	____	weak
honest	____	____	____	____	____	____	dishonest
active	____	____	____	____	____	____	passive
unpleasant	____	____	____	____	____	____	pleasant
small	____	____	____	____	____	____	large
worthless	____	____	____	____	____	____	valuable
slow	____	____	____	____	____	____	fast
fair	____	____	____	____	____	____	unfair
soft	____	____	____	____	____	____	hard
cowardly	____	____	____	____	____	____	brave
sharp	____	____	____	____	____	____	dull
friendly	____	____	____	____	____	____	unfriendly
heavy	____	____	____	____	____	____	light
unsuccessful	____	____	____	____	____	____	successful
violent	____	____	____	____	____	____	moderate

BLACK PERSON

kind	____	____	____	____	____	____	cruel
thick	____	____	____	____	____	____	thin
clean	____	____	____	____	____	____	dirty
cold	____	____	____	____	____	____	hot
bad	____	____	____	____	____	____	good
strong	____	____	____	____	____	____	weak
honest	____	____	____	____	____	____	dishonest
active	____	____	____	____	____	____	passive
unpleasant	____	____	____	____	____	____	pleasant
small	____	____	____	____	____	____	large
worthless	____	____	____	____	____	____	valuable
slow	____	____	____	____	____	____	fast
fair	____	____	____	____	____	____	unfair
soft	____	____	____	____	____	____	hard
cowardly	____	____	____	____	____	____	brave
sharp	____	____	____	____	____	____	dull
friendly	____	____	____	____	____	____	unfriendly
heavy	____	____	____	____	____	____	light
unsuccessful	____	____	____	____	____	____	successful
violent	____	____	____	____	____	____	moderate

WHITE PERSON

kind	____	____	____	____	____	____	cruel
thick	____	____	____	____	____	____	thin
clean	____	____	____	____	____	____	dirty
cold	____	____	____	____	____	____	hot
bad	____	____	____	____	____	____	good
strong	____	____	____	____	____	____	weak
honest	____	____	____	____	____	____	dishonest
active	____	____	____	____	____	____	passive
unpleasant	____	____	____	____	____	____	pleasant
small	____	____	____	____	____	____	large
worthless	____	____	____	____	____	____	valuable
slow	____	____	____	____	____	____	fast
fair	____	____	____	____	____	____	unfair
soft	____	____	____	____	____	____	hard
cowardly	____	____	____	____	____	____	brave
sharp	____	____	____	____	____	____	dull
friendly	____	____	____	____	____	____	unfriendly
heavy	____	____	____	____	____	____	light
unsuccessful	____	____	____	____	____	____	successful
violent	____	____	____	____	____	____	moderate

NEGRO PERSON

kind	____	____	____	____	____	____	cruel
thick	____	____	____	____	____	____	thin
clean	____	____	____	____	____	____	dirty
cold	____	____	____	____	____	____	hot
bad	____	____	____	____	____	____	good
strong	____	____	____	____	____	____	weak
honest	____	____	____	____	____	____	dishonest
active	____	____	____	____	____	____	passive
unpleasant	____	____	____	____	____	____	pleasant
small	____	____	____	____	____	____	large
worthless	____	____	____	____	____	____	valuable
slow	____	____	____	____	____	____	fast
fair	____	____	____	____	____	____	unfair
soft	____	____	____	____	____	____	hard
cowardly	____	____	____	____	____	____	brave
sharp	____	____	____	____	____	____	dull
friendly	____	____	____	____	____	____	unfriendly
heavy	____	____	____	____	____	____	light
unsuccessful	____	____	____	____	____	____	successful
violent	____	____	____	____	____	____	moderate