MASTER'S THESIS M-630

HART, Joseph Patrick
EVALUATIVE PATTERNING OF INTRALATITUDE CATEGORIES IN ATTITUDE ASSESSMENT.

The University of Oklahoma, M.S., 1967
Social Psychology

University Microfilms, Inc., Ann Arbor, Michigan

© Copyright by

JOSEPH PATRICK HART

1970

Downloaded from SHAREOK. Persistent Handle URL: https://hdl.handle.net/11244/252

THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

EVALUATIVE PATTERNING OF INTRALATITUDE CATEGORIES IN ATTITUDE ASSESSMENT

A THESIS

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

MASTER OF SCIENCE

BY

J. PATRICK HART

Norman, Oklahoma

1967

EVALUATIVE PATTERNING OF INTRALATITUDE

CATEGORIES IN ATTITUDE ASSESSMENT

A THESIS

APPROVED FOR THE DEPARTMENT OF PSYCHOLOGY

BY

William R. Hood

William Turner

H. Gabbard

ACKNOWLEDGMENTS

The author wishes to express deep appreciation and thanks to the members of his committee. To Dr. William R. Hood, thesis director, I wish to express grateful acknowledgment for timely encouragement and invaluable intellectual stimulation.

Special thanks goes to Mrs. Betty Frensley for the typing of this thesis.

I would also like to acknowledge the continual support and encouragement of my wife, Joyce, without which this degree would not have been possible.

TABLE OF CONTENTS

Page

LIST OF TABLES v

LIST OF FIGURES vi

Chapter

I. INTRODUCTION 1

II. METHOD 17

III. RESULTS 24

IV. DISCUSSION 40

V. SUMMARY 48

REFERENCES 51

APPENDIX A--Forty Statements Used in Present Study with Median Scale Values and Category Range Derived in Pretesting by Host (1963) and Parrish (1963) 54

APPENDIX B--Experimental Questionnaire 58

APPENDIX C--Unusable Subjects 61

APPENDIX D--Number and Per Cent of Persons that Chose Each Position Out of the 11 Response Categories as "Most Acceptable" 62

APPENDIX E--Responses of Subjects to Attitude Assessment Procedures and Experimental Questionnaire . . . 63

LIST OF TABLES

Table		Page
1	Mean Response by Hard Moderate and Soft Moderate Subjects for Each of the 11 Response Categories.	26
2	Mean Number of Statements and Categories in Latitude of Rejection for Hard Moderate and Soft Moderate Subjects	29
3	Mean Number of Statements and Categories in Latitude of Noncommitment for Hard Moderate and Soft Moderate Subjects	30
4	Mean Number of Statements and Categories in Latitude of Acceptance for Hard Moderate and Soft Moderate Subjects	32
5	Summary of Mean Number of Statements Placed in the Latitude of Rejection, Noncommitment and Acceptance by Extreme, Hard Moderate and Soft Moderate Subjects .	33
6	Summary of Mean Number of Categories Placed in the Latitude of Rejection, Noncommitment and Acceptance by Extreme, Hard Moderate and Soft Moderate Subjects .	35
7	Per Cent of Subjects with a "Natural Choice" Response for Each of 3 Questions Concerning Demand Characteristics of Experimental Procedure	39

LIST OF FIGURES

Figure		Page
1	Mean Number of Statements Placed in Each Category for Soft Moderate Group and Hard Moderate Group. . . .	28
2	Mean Number of Statements Placed in Latitude of Rejection, Noncommitment and Acceptance by Extreme, Hard Moderate and Soft Moderate Subjects	33
3	Mean Number of Categories Used in Latitude of Rejection, Noncommitment and Acceptance by Extreme, Hard Moderate and Soft Moderate Subjects	35

EVALUATIVE PATTERNING OF INTRALATITUDE CATEGORIES IN ATTITUDE ASSESSMENT

CHAPTER I

INTRODUCTION

Persistent attitude research grounded in previous work in basic psychological processes, especially judgmental behavior, has brought about a conceptualization of attitude based upon evaluations and categorization of the stimuli toward which the attitude is held. Sherif and Hovland (1961) and Sherif, Sherif and Nebergall (1965) present the theoretical foundations and experimental findings of the social judgment-involvement approach to attitude and attitude change.

The social judgment-involvement approach represents a merging and extension of certain relevant aspects of two divergent lines of research. The first line of research is that of investigation into the keenness of discrimination of motivationally neutral stimulus items. This line of development comes under the heading of psychophysics. The second line of development is represented in research in which systematic variations in judgment are studied in relation to motivational, attitudinal, personality and social factors. Findings from the

two lines of investigation indicate similarity of basic principles in operation.

Psychophysical Scales

Experimental findings dealing with the psychophysical study of judgment and stimulus arrangements has shown that a reference scale is formed in relation to encounters with a series of stimuli. (Fernberger, 1931; Pfaffman, 1935; Wever & Zener, 1928) The stimuli used in such laboratory studies of judgment consist of a well-graded series of discriminable physical stimuli such as weights, lines or tones. The psychological scale formed by the individual after recurrent presentations of the series of stimuli bears a close relationship to the stimulus series and can be studied in terms of objective units of physical dimensions. Psychological scales of this nature are referred to as psychophysical scales. (Sherif, Sherif & Nebergall, 1965)

Depending upon the nature of the stimulus arrangements and conditions certain items come to serve as standards against which other items in the series are judged. Such items are the physical standard prescribed by the experimenter and the end items defining the extreme points of the scale. (Bessler, 1933; Volkmann, 1951; Wever & Zener, 1928) The stimulus condition used in laboratory studies of judgment that involves the formation of a psychological scale based on a well-graded stimulus series having an explicit standard within it is exemplified by experiments using the method of "constant stimuli." (Sherif &

Hovland, 1961) A well-graded series of discriminable physical stimuli (a total of 5-15 for instance) called comparison stimuli are presented to the subject one at a time in random order. A standard stimulus with a value that is usually near the center of the range of the series of stimuli is presented along with each presentation of a comparison stimuli. On every trial the comparison stimuli is judged in terms of the standard stimulus. A characteristic finding for the method of constant stimuli is that there is greater accuracy in judgment of stimuli that have values near the standard stimulus than for stimuli in other areas of the scale. (Long, 1937; Woodworth & Schlosberg, 1954)

A second method commonly used in psychophysical study is the method of single stimuli. The method of single stimuli involves presentation of a series of perhaps 5 to 10 stimuli to a subject repeatedly in random order without being accompanied on each trial by an explicit standard stimulus. The subject is instructed to classify the stimuli under certain categories. The categories may be steps such as heavy, medium or light; they may be numerical units such as one to six, with one being the lightest and six being the heaviest (e. g., with weights); or they may be estimates in physical units such as grams, inches or decibels. (Woodworth & Schlosberg, 1954) As the number of presentations of the series increases the subject becomes more and more accurate in placing the stimuli in their appropriate position in the series thus indicating formation of a reference scale in relation to the stimulus series. Whereas the standard stimulus in the method of constant

stimuli served as a standard against which items in the stimulus series were judged, in the method of single stimuli the highest and lowest values or end points of the stimulus series come to serve as standards against which other items in the series are judged. Greatest accuracy of judgments occurred in the end regions of the series while the greatest variability and error of judgment occurred in the middle region of the series. (Wever & Zener, 1928; Needham, 1935; Volkmann, 1951)

In the process of experiencing repeated encounters with a stimulus series an individual learns a whole background of similar objects against which he judges further encounters with stimuli of the series. This background for a particular comparison is called the reference scale of the individual. (Sherif & Hovland, 1961) All of the items or categories that the individual encounters may influence a particular comparison. As was discussed above, certain items in the series may, however, have greater influence in judgment. Sherif and Hovland (1961) state that "end points or other standards with greater effect in determining judgment of an item may be referred to as anchorages or simply as anchors." (pp. 29-30, emphasis in original) Furthermore,

> anchorages may be stimulus factors external to the individual, and they may also be internal, that is concepts or categories previously formed by the individual during the course of encounters with the stimuli in question. (Sherif & Hovland, 1961, p. 30)

Psychosocial Scales

In classic psychophysical research anchors or standards for

comparison are initially external to the individual. They are an aspect of the stimulus conditions or arrangements provided by the experimenter and are characteristically motivationally neutral in nature. Effort is taken to exclude the operation of affective or social factors from influencing results.

In the study of attitudes within a systematic framework of judgmental behavior the influence of affective or motivational factors in the judgment process assumes prime importance. The influence on judgmental behavior of an affective anchor that is not part of the well defined series of stimulus objects provided by the experimenter was demonstrated by Hunt and Volkmann (1937). They presented a series of colored papers and directed subjects to place the colors in categories from "one" to "seven," the higher numbers representing the pleasant segment of the scale. The subjects were further instructed to "think of the most pleasant color you can" and "let its pleasantness define the step 'seven' on your scale." (Hunt & Volkmann, 1937, pp. 88-89) The internal anchoring stimuli consisted in this case of the affectively charged "most pleasant color" for the subject. The effect of the anchor on the judgments of the subject was to bring about a systematic shift in placement of the series of colors away from the internal anchorage, a finding that is similar to experiments in psychophysics in which an anchor is introduced outside the range of the reference scale that the subject has formed in relation to repeated judgments of the well-graded series of stimulus objects. (Helson & Nash, 1960)

Additional evidence of systematic effects of motivational factors and anchors outside the experimental series have been demonstrated in a variety of experimental conditions: (a) Hunt (1941) in securing aesthetic judgments and normative judgments using complex stimulus materials; (b) Wells (1937) in noting the spontaneous functioning of internal standards in estimations of scientific merit; and (c) Perloe (1960) in securing judgments of occupational prestige.

The effect of an individual's reference scale formed in relation to his usual workaday activities upon judgment of a series of stimuli presented in a laboratory situation was investigated by Tresselt (1948). Tresselt had two groups judge the same series of twelve weights. Groups with differences in prior experience in lifting weights were provided by comparing professional weight lifters with watchmakers and university students. She found that the weight lifters tended to place heavier weights in the "medium" categories while the watchmakers and students more often placed the heavier weights in the heavy categories. Tresselt's investigation clearly demonstrated the effect of a reference scale formed by an individual during the course of everyday encounters on judgment of a series of relevant stimuli in the controlled setting of the laboratory.

During the course of relations with one's fellow man, contacts with social objects and experiences of social events an individual develops a background through learning which functions as a scale against which future encounters with relevant stimuli are judged. Evidence for

the existence of such a psychological scale is found in the observations of the sociologist C. S. Johnson concerning preference of skin color by Negro youth. Johnson (1941) observed that preference was revealed by the tendency for students to judge the skin color of popular school principals as being more towards the preferred light brown direction than they actually were and for the skin color of unpopular school principals as being more towards the less-preferred dark brown direction than they actually were. The systematic displacement of the two classes of social stimulus objects (school principals) in relation to the dimension of shadings of skin color is evidence of a reference scale concerning the generally preferred skin color in the group. Reference scales formed in relation to socio-cultural stimuli such as religious, moral and social issues and which are not generally objectively well-graded as is the case with psychophysical scales, are called psychosocial scales. (Sherif & Hovland, 1961) One important difference between psychological scales formed in relation to a well-graded stimulus series in a laboratory setting and psychosocial scales is the evaluative nature of the latter. That is, in as much as the major properties of psychosocial scales reflect the consensus, defined by social norms, prevailing among a given people or social group at a particular period in history, they (psychosocial scales) reflect "the limits of acceptability and the limit of what is objectionable" concerning an issue of social importance. (Sherif et al., 1965, p. 10)

Social Judgment-Involvement Approach

From childhood on an important aspect of an individuals relations with other persons, with objects and groups consists of placing these social objects and events somewhere in his scheme of things. The labeling of these social stimuli involves their appraisal on the part of the individual in "approving, disapproving, or other affective tones." (Sherif et al., 1965, p. 5) When a class of objects, persons, or a group comes to have favorable or unfavorable values for an individual his behavior in relation to these things becomes selective. When we observe selective and consistent patternings of behavior by an individual or a group of persons in response to social objects we have grounds for inferring the existence of social attitudes. (Campbell, 1950; Sherif & Sherif, 1956) Social attitudes are formed in relation to identifiable referents which may be material or non-material culture; family, school or nation; religious or political organizations. We may refer to attitudes in the sense of a constitutive definition as "the stands the individual upholds and cherishes about objects, issues, persons, groups, or institutions." (Sherif et al., 1965, p. 4)

To the extent that an attitude represents a salient stand taken by an individual on a given issue it functions as an anchor in the judgmental process. (Sherif & Reich, 1963) Psychological reference scales varying in range and number of categories are formed as a result of encounters with social stimuli represented in phenomena such as social norms, interpersonal interaction and the setting of interactions.

Sherif and Hovland (1961) state that "a certain category in such a reference scale becomes the individual's preferred category." They go on to say that "this position within the scale represents his own stand on the issue and serves as a major anchor in judgment." (p. 13)

The assumption is not made, however, in the social judgment approach to the study of attitudes that a single position or category in a scale or series adequately represents the individual's stand for the purpose of understanding his reaction to relevant stimuli such as a communication or reaction to the behavior of a member of an out group. Although individuals may hold the same single most acceptable position on an issue, the evaluative patterning of the categories within their reference scales may vary. Consequently, an attitude cannot be properly represented in a punctiform measure such as a single point on a continuum. At present an attitude is more adequately operationally defined by (a) the position on an issue that is most acceptable, plus other acceptable positions (latitude of acceptance), (b) the position on the same issue that is most objectionable, plus other objectionable positions (latitude of rejection) and (c) positions that the individual neither accepts nor rejects but remains noncommittal on in overt action (latitude of noncommittment) when the latitudes are considered in relation to the bounds of available alternatives defined by the end points or categories on the issue. (Sherif et. al., 1965)

The focus of social judgmental research has been on the characteristic patterning of the evaluative categories as they relate to attitude

structure and problems of attitude change. The dependent measures have included primarily (a) location of the most acceptable and most objectionable positions, (b) the size and location of the latitude of acceptance, rejection, and noncommitment and (c) the placement of communications toward or away from an individual's own position or latitude of acceptance.

Tentative Generalizations

Research employing procedures of attitude assessment appropriate to the study of attitudes within a systematic framework of judgmental behavior has produced tentative generalizations concerning the structure of attitudes. These generalizations are described in terms of characteristic patternings of the dependent measures just mentioned. The following generalizations reported in Sherif et. al., (1965) are based on studies on a variety of issues:

> 1. In proportion to the extremeness of an individual's stand on the issue, the latitude of rejection is greater than the latitude of acceptance and noncommitment approaches zero.
>
> 2. Proportional to the moderateness of the individual's position on an issue, the size of his latitudes of acceptance and rejection approaches equality.
>
> 3. As a result, the latitude of rejection of a person with an extreme stand is greater than that of a person taking a moderate position on the issue and his latitude of noncommitment is smaller. (p. 233)

According to the generalizations cited above there apparently is a relationship between extremeness of stand and patterning of evaluations.

However, Sherif et. al., (1965) states in addition that there is "strong evidence that the crucial determinant of the relationship between extremeness of stand and the pattern of evaluations is not extremeness as such, but rather the high probability that the individual extreme in his position will be highly involved in it." (p. 233, emphasis in original) Some such evidence is found in relation to research in which persons were selected for study on the basis of a previously observed public commitment to a favorable or unfavorable stand on a controversial issue. Persons that demonstrated a strong favorable or unfavorable commitment typically revealed a patterning of latitudes of acceptance, rejection, and noncommitment described in the generalizations above for persons choosing an extreme stand, even though many of them did not find the most extreme positions most acceptable. (Sherif et al., 1965) Following from such evidence and on the basis of research revealing the role of personal involvement (Elbing, 1962; Reich & Sherif, 1963; Whittaker, 1963) Sherif et. al., (1965) postulate "that size of latitudes of rejection increases and size of latitudes of noncommitment decreases in proportion to degree of involvement in the issue, regardless of extremeness of the most acceptable position." (p. 234, emphasis in original)

In summary, the overall findings indicate that all along the range of positions on a particular social issue there may be persons that uphold their stand with varying degrees of involvement, that the involvement or lack of it will be expressed in terms of rather standard variations

in latitude of rejection and latitude of noncommitment, and that persons with a high degree of involvement most often are at extreme positions but all persons choosing an extreme position do not necessarily express involvement.

Position on Issue and Involvement

One of the problems for research growing out of the overall findings of the social judgment-involvement approach is the question of identifying or describing individuals that hold "moderate" or "neutral" attitudes in terms of position selected on a scale but who may be more or less involved with that position. In a recent discussion of limitations of existing scales for the measurement of social attitudes with particular reference to research concerning the social judgment-involvement approach, Diab (1965) proposes on the basis of recent research (Diab, 1965a; 1965b) that further refinement of measuring instruments should permit differentiation among individuals who hold the same moderate "own position" on a social issue. The first line of evidence on which Diab bases his proposal involves research in which a slightly modified version of the Sherif & Hovland technique (Sherif & Hovland, 1961, p. 133) was used to assess attitudes of 260 Arab students at the University of Beirut concerning the issue of Arab unity. (Diab, 1965a) In addition to providing instructions for assessing the latitudes of acceptance and rejection, each subject was asked to indicate how strongly he felt about each of the positions on the nine point scale that he had checked as

"most acceptable," "also acceptable," "most objectionable," or "also objectionable," by placing before each position one of the following: "Very Strongly," "Strongly" or "Mildly." Diab (1965a) found that subjects who chose a moderate position (category 4, 5 or 6 on a 9 point scale) as "most acceptable" and that upheld their most acceptable position strongly or very strongly demonstrated a patterning of evaluative categories (latitudes of acceptance and rejection) that was different from moderate subjects who felt only mildly about their "most acceptable" position. The moderate subjects that felt strongly or very strongly about their "most acceptable" position rejected a significantly greater number of items than they accepted whereas the moderate subjects that felt only mildly about their "most acceptable" position did not demonstrate a significant difference between latitude of acceptance and rejection. Also, moderate subjects that strongly upheld their "own position" on the issue rejected a significantly greater number of items than did moderates that only mildly upheld their position. (Diab, 1965a) In regards to these findings Diab concludes, in his discussion of limitations of existing scales for the measurement of attitudes, that "not all Ss designated 'moderates' or 'neutrals' by the Sherif & Hovland technique can be considered as homogeneous grouping." (Diab, 1965, p. 428)

The second line of evidence cited by Diab (1965) in support of his conclusions concerning persons designated as "moderate" or "neutral" involved the use of semantic-differential scales developed by Osgood, Suci, and Tannenbaum (1957) to provide additional information

concerning the attitudes toward Arab unity for the same sample of subjects in the study just reported above. In addition to assessing the subjects attitudes toward Arab unity using a modified Sherif & Hovland technique, 13 different semantic differential scales representing evaluative, potency and activity factors of meaning were administered to the subjects. (Diab, 1965b) The subjects judged the concept of "Arab unity" against each of the 13 semantic-differential scales in accordance with the semantic-differential procedure.

The results provided additional evidence that the moderate subjects (according to their choice of "most acceptable" position using the Sherif & Hovland technique) did not seem to represent a homogeneous grouping as measured by their mean evaluative ratings on the semantic-differential evaluative scales. Approximately 62 per cent of the "so-called moderate subjects" had evaluative ratings of Arab unity that indicated that they were either for or against Arab unity. (Diab, 1965b) That is, more than half of the subjects that chose a moderate position on the issue were, in so far as the evaluative dimension was concerned, similar to either extreme pro-Arab unity or extreme anti-Arab unity subjects.

Problem and Hypotheses

Absent from recent reports of research on attitudes within a social judgment-involvement approach have been findings relating to investigation of internal characteristics of the evaluative patternings

(latitudes of acceptance and rejection) other than those findings reported by Diab (1965; 1965a; 1965b) which were mentioned above concerning only the "most acceptable" and "most objectionable" positions. In other words, no reports have been made concerning the evaluative patternings of those categories within the individual's latitudes of acceptance that are "also acceptable" as they relate in position to the individual's own position or his most objectionable position, and to the patterning of latitudes within the bounds defined by the end points on the issue.

The present study seeks to investigate, by extending existing procedures of assessment and by using tentatively established generalizations, the possibility of gaining a more adequate conceptualization of attitude structure. With this purpose in mind, the following question was asked: What is the relationship between the evaluative patterning of categories within the latitude of acceptance and the size of the latitude of rejection and latitude of noncommitment?

Based on previous findings that personal involvement in an issue is reflected in the size of the latitude of rejection and the latitude of noncommitment, and upon an extension of standard procedures in assessment intended to characterize the way in which a subject evaluates categories within the latitude of acceptance in relation to his most acceptable position and to the end categories defining the most extreme positions, the following predictions were made concerning only subjects that chose as their most acceptable position, a moderate position (that is, not one of the two most extreme categories on each end of the scale, or the

middle or "neutral" position, i. e., category 6):

1. Subjects that choose a category (in relation to their most acceptable position) toward the extreme end of the scale representing their side of the issue, as being the category within their latitude of acceptance that is next in acceptableness to their most acceptable position, will reject more statements and use more categories in their latitude of rejection than subjects that choose a category toward the extreme end of the scale representing the side of the issue opposite their stand.

2. Subjects that choose a category (in relation to their most acceptable position) toward the extreme end of the scale representing the side of the issue opposite their own stand as being the category within their latitude of acceptance that is next in acceptableness to their most acceptable position, will place more statements and use more categories in their latitude of noncommitment than subjects that choose a category toward the extreme end of the scale representing their side of the issue.

CHAPTER II

METHOD

Subjects

The subjects were 58 male and 89 female undergraduate students obtained from introductory psychology courses at the University of Oklahoma during the months of November and December, 1966. Subject participation was on a voluntary basis. Incentive for volunteering was provided by offering extra class credit. Of the 147 subjects, 145 were white and two were Negro.

Materials

A series of 40 statements (see Appendix A) of opinion on the social position of the Negro were used as items to be sorted. The statements were duplicated on the plain side of data processing cards. The cards were numbered by card punch on the back to facilitate tabulation of results.

The items had been pretested and used by Parrish (1963) and Host (1963) in studies of anti-Negro prejudice. The 40 statements used in the present study and in the two previous studies were selected by Parrish and Host from an original series of 136 statements gathered

from newspapers, editorials, and magazines. A successive series of pretests using both pro-Negro and anti-Negro judges reduced the number of statements to the present 40 statements.

In the selection of the final 40 items, 5 statements were chosen as positive anchors. These positive anchors were placed by both anti-Negro and pro-Negro judges into the favorable end of an 11 point scale toward category 11, the most favorable position. Five statements were chosen as negative anchors. The negative anchors were consistently placed by both anti-Negro and pro-Negro judges into the unfavorable end of the 11 point scale toward category 1, the most unfavorable position.

The remaining 30 items of the final 40 that were selected by Parrish and Host were displaceable items. These displaceable items have median scale values near 6, the center of the 11 category scale, and serve to discriminate between pro-Negro and anti-Negro subjects by being placed by anti-Negro subjects toward the end of the scale used by pro-Negro subjects and by being placed by pro-Negro subjects toward the end of the scale used by anti-Negro subjects. (Parrish, 1963)

Preceding the subjects' entrance into the testing room, 11 numbered cards 2 1/2" x 3" designating the categories to be used were spread in order across the table. The number 1 card (labeled unfavorable) was on the subjects' left and the number 11 card (labeled favorable) was placed on the subjects' right with the remaining numbered cards arranged in order between them. The deck of 40 statements, put in

random order, was placed face down on the table.

Procedure

The procedures were administered to individuals and small groups of 2 to 5 persons depending upon the number of subjects that had volunteered for each testing period. Subjects were seated at tables and were separated by 30" x 36" partitions to insure that they were not able to observe the sorting of each other.

The subjects were met by the experimenter in a waiting room and were brought to the room in which the testing took place. After the subjects were seated they were told that the task they were to take part in was a sorting task. The subjects were also told that they would not be required to put their names on their sorting.

A set of instructions which are similar in procedure to those used by Sherif and Hovland (1953) and Vaughn (1961) was given to each subject. The experimenter informed the subjects that he would read through the instructions aloud and asked that the subjects read along silently. The following instructions were then read aloud by the experimenter:

> On the other side of the IBM cards in front of you are a number of statements expressing opinions in regard to the social position of the Negro. These cards are to be sorted into different piles. You will find it easier to sort them if you pick them up and look over a number of cards, chosen at random before you begin to sort.
>
> You see spread across the table 11 numbered cards. Please sort the statements into these 11 categories placing the statements which are most unfavorable toward the

> Negro into the first pile and those which are most favorable toward the Negro into the last pile regardless of whether the statements are true or false. You may use as many or as few of the categories as you wish. Put statements into the same pile which belong together in terms of their relative stand on the issue, that is, favorable or unfavorable. Please place your piles below the card with the corresponding number. Use your judgment as to where each statement should be placed in the piles. Do not be concerned about the number of cards in each pile. When you are through sorting please put the numbered cards on top of the pile and remain seated.

Following the instructions subjects were asked if they had any questions. Subjects were then told they could begin. When all subjects had completed the sorting, a pencil and a 2 1/2" x 3" sized blank tablet were given to each subject. Instructions were then continued.

> Now I would like you to choose the pile of cards that comes closest to your view on the issue. Then, take one of the blank sheets, put it on top of the pile that you have selected and write on top of the blank sheet "most acceptable." If there are other piles containing statements also acceptable to you, place a blank sheet on top of those piles and write "acceptable" on them.
>
> Now take a blank sheet and put it on top of the pile of cards which is most objectionable from your point of view and write "most objectionable" on the top. If there are other piles containing statements that are objectionable from your point of view put a blank sheet on top of each and write "objectionable" on the blank sheet.

When the subjects had completed sorting in accordance with the preceding instructions which complied closely with those of usual procedures for securing the latitudes of acceptance, rejection and noncommitment (Sherif & Hovland, 1953; Vaughn, 1961), the procedure designed

to assess an evaluative "direction" or "leaning" within a subject's latitude of acceptance or rejection was administered. Subjects were instructed as follows:

> If you have 2 or more stacks that you have labeled "acceptable" I want you to consider those stacks and if any one of them is more acceptable to you than the remaining stacks labeled "acceptable" take a blank sheet, place it on top of the stack that is more acceptable than the others and write the number 1 on the sheet. Number the next most acceptable stack 2 and so on as long as any one stack is more acceptable than those stacks remaining that you have labeled "acceptable."
>
> Now if you have 2 or more stacks that you have labeled "objectionable" I want you to consider those stacks and if one of them is more objectionable to you than the remaining stacks labeled "objectionable" take a blank sheet, place it on top of the stack that is more objectionable than the others and write the number 1 on the card. Number the next most objectionable stack 2 and so on as long as any one stack is more objectionable than those stacks remaining that you have labeled "objectionable."

When all subjects had completed the task they were told to place a rubber band around each of the stacks and to leave the stacks spread across the table. Subjects were given a questionnaire (see Appendix B) asking for information relating to age, sex, student classification and containing questions concerning the importance of the issue for them and the difficulty or ease encountered in that part of the experiment where they were asked to judge for relative acceptableness and objectionableness those stacks labeled "acceptable" and those labeled "objectionable." After the subjects had completed the questionnaire they were asked not to discuss the procedures of the experiment with fellow students and

were dismissed.

Summary of Experimental Design

To test predictions concerning the relationship between evaluative categorization within the latitude of acceptance and the size of the latitude of rejection and noncommitment, a design was used in which subjects choosing a moderate position as their "own position" were classified into one of two assignment groups on the basis of their judgments of the category within the latitude of acceptance that is next in acceptableness to the most acceptable position. Subjects that chose a category (in relation to their most acceptable position) toward the extreme end of the scale representing their side of the issue as the category within their latitude of acceptance that is next in acceptableness to their most acceptable position were placed in the "Hard Moderate" group. Subjects that chose a category (in relation to their most acceptable category) toward the extreme end of the scale representing the side of the issue opposite their own stand were placed in the "Soft Moderate" group.

It was anticipated that relatively few subjects would choose "unfavorable" or "anti-Negro" positions (i.e., categories 1-5) and that as a result no separate analysis of the "anti" side of the scale for the relevant questions of the study would be possible. Furthermore, the middle position (category 6) was interpreted in line with Sherif et. al., (1965) as being a neutral or more appropriately a "middle of the road"

position, not necessarily a "moderate pro" or "moderate anti" position. As a consequence of the two considerations just mentioned it was decided to limit the investigation to those subjects that chose as their "most acceptable" position a category on the favorable side of the issue (i. e., category 7, 8, 9, 10 or 11).

CHAPTER III

RESULTS

A total of 205 subjects volunteered and participated in the present study. Of the 205 subjects that took part, a total of 147 chose a category on the favorable side of the issue as their "most acceptable" position. In accordance with the considerations pointed out in the preceding section (p. 22-23), concerning subjects who take an unfavorable stand and subjects who take a "middle of the road" position, the 147 subjects that chose a position on the favorable side of the issue served as the sample to be investigated in the present study. Of the remaining 58 subjects out of the 205, a total of 26 chose as their "most acceptable" position a category on the unfavorable side of the issue (i. e., category 1, 2, 3, 4 or 5), 15 subjects chose the middle position (category 6) as "most acceptable" and 17 subjects made sorting responses which prompted exclusion of their sorting from the analysis for reasons which are described in detail in Appendix C. The per cent of persons who took a stand (a) on the favorable side of the issue, (b) on the unfavorable side of the issue and (c) at the middle position is shown in Appendix D as part of a tabular display of the per cent of persons who chose each position out of the 11 response categories as "most acceptable."

Of the 147 subjects selected for analysis on the basis of having chosen a stand on the favorable side of the issue, a total of 29 chose as their "most acceptable" position a "moderate" position (i. e., category 7, 8 or 9). On the basis of the classification procedures described in the preceding chapter which concern the evaluative patterning of categories within the latitude of acceptance, 17 of the 29 moderate subjects were assigned to the "Hard Moderate" group and 12 of the moderate subjects were assigned to the "Soft Moderate" group. The remaining 118 subjects out of the 147 chose either category 10 or 11 as their "most acceptable" position and were placed on the basis of holding an "extreme" stand on the issue in the "Extreme" assignment group.

The statistical comparisons that were made between Hard Moderate and Soft Moderate subjects throughout the present study involved a small sample. Furthermore, the data used to test the comparisons of the two groups achieves at most an ordinal scale. Consequently, it was decided to use the Mann-Whitney U Test, which, according to Siegel (1956), "When at least ordinal measurement has been achieved. . . may be used to test whether two independent groups have been drawn from the same population." (p. 116)

In order to determine if any overall difference in placement of statements was evident between Hard Moderate and Soft Moderate subjects, a comparison was made of the number of statements placed in each of the 11 response categories by the two groups. For each of the 11 categories the number of statements used by subjects in the Hard

Moderate group and the number of statements used by subjects in the Soft Moderate group were ranked together and a U was derived. Table 1 shows the mean number of items, the Mann-Whitney U, and the level of significance for a two-tailed test for each of the 11 categories.

Table 1

Mean Response by Hard Moderate and Soft Moderate Subjects for Each of the 11 Response Categories

	Mean Response			
Category	Hard Moderates N = 17	Soft Moderates N = 12	Mann-Whitney U	p[a]
1	4.00	2.42	63.0	<.10
2	3.12	4.83	71.5	>.10
3	3.24	4.08	77.0	>.10
4	3.41	4.83	73.0	>.10
5	3.47	3.67	86.0	>.10
6	4.71	3.42	84.0	>.10
7	2.76	3.41	89.0	>.10
8	3.47	4.00	98.0	>.10
9	3.29	3.91	83.0	>.10
10	3.71	2.92	79.5	>.10
11	4.82	2.50	50.5	<.05

[a]Two Tail Test

Source: Appendix E

It can be seen in Table 1 that subjects in the Hard Moderate group (mean = 4.82) placed significantly more statements ($p < .05$) in the end position--that is, category 11--on the favorable side of the issue than did subjects in the Soft Moderate group (mean = 2.50). Also worth noting in Table 1 is the difference between Hard Moderate subjects (mean = 4.00) and Soft Moderate subjects (mean = 2.42) for the opposite end position--that is, category 1--which shows a trend toward significance ($p < .10$) but does not reach an acceptable level. No significant difference in the placement of statements was found between Hard Moderates and Soft Moderates for the remaining 9 categories on the scale.

A graphic display of the distribution of statements across the 11 categories by the two groups is shown in Figure 1. Two aspects of the comparison of distributions shown in the graphic display deserve mention. First, notable in Figure 1 is the trend toward bunching statements into the two end categories by Hard Moderate subjects. Secondly, although not significant with regard to comparison between the two groups on individual categories it can be seen in Figure 1 that subjects in the Soft Moderate group placed a slightly higher frequency of statements in 7 of the 9 less extreme categories, that is categories 2, 3, 4, 5, 7, 8 and 9.

It was predicted that subjects in the Hard Moderate group would place more statements and use more categories in their latitude of rejection than would subjects in the Soft Moderate group. Testing of the prediction involved calculation of a Mann-Whitney U to compare the number of statements placed in the latitude of rejection by Hard Moderate

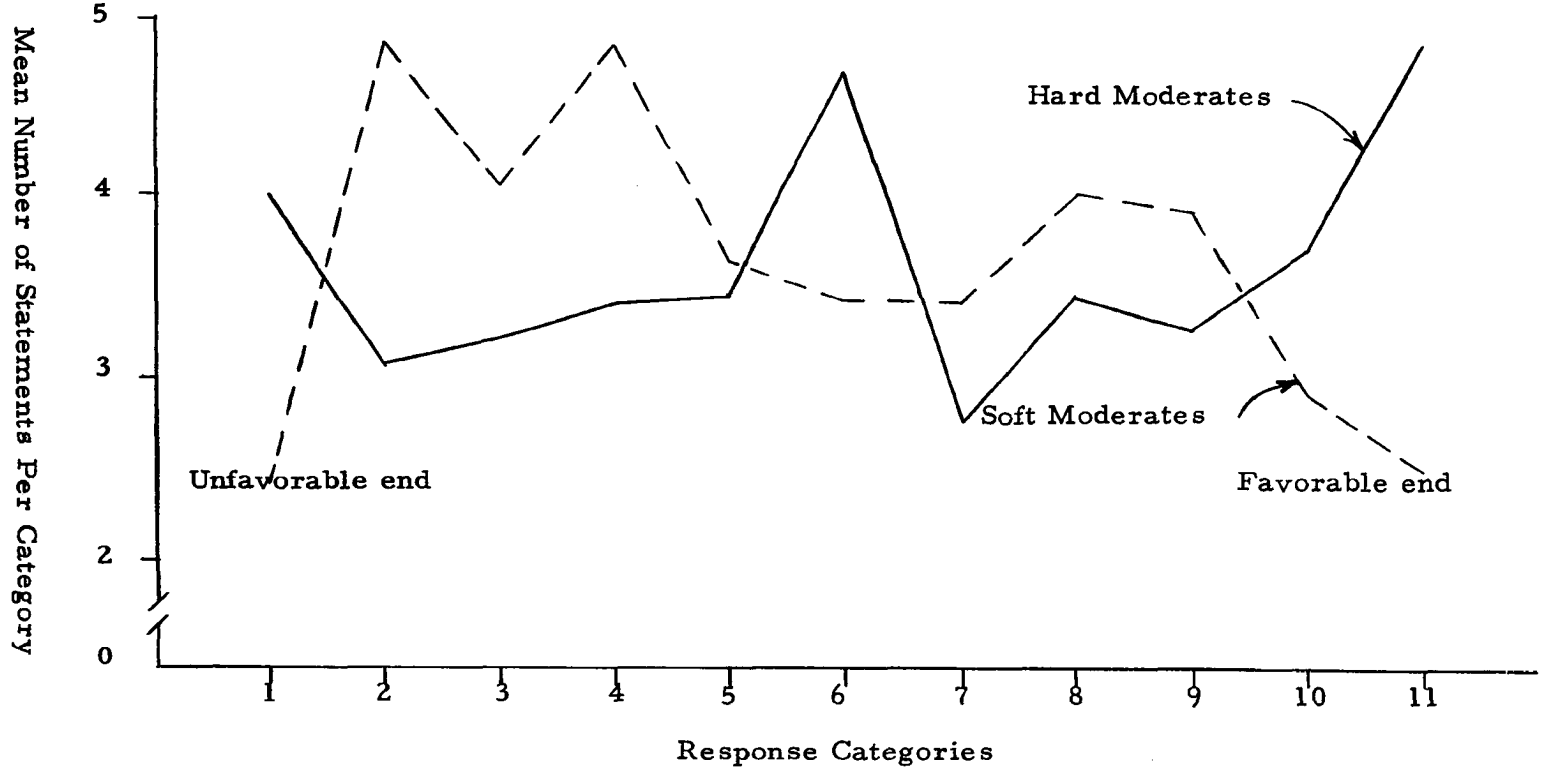


Fig. 1. Mean Number of Statements Placed in Each Category for Soft Moderate Group and Hard Moderate Group.

Source: Table 1

subjects and by Soft Moderate subjects and calculation of a Mann-Whitney U to compare the number of categories used in the latitude of rejection by each group.

It can be observed in Table 2 that the difference between Hard Moderate subjects (mean = 11.59) and Soft Moderate subjects (mean = 9.08) for number of statements placed in the latitude of rejection was in the predicted direction but did not reach an acceptable level of significance ($p > .05$). It can also be seen in Table 2 that the difference, though not significant ($p > .05$), between Hard Moderate (mean = 2.88) and Soft Moderate (mean = 2.33) subjects was in the predicted direction for number of categories used in the latitude of rejection.

Table 2

Mean Number of Statements and Categories in Latitude of Rejection for Hard Moderate and Soft Moderate Subjects

	Mean Response			
	Hard Moderates N = 17	Soft Moderates N = 12	Mann-Whitney U	p
Statements	11.59	9.08	66	$> .05$
Categories	2.88	2.33	76	$> .10$

Source: Appendix E

The second prediction states that subjects in the Soft Moderate group will place a larger number of statements and use more categories

in the latitude of noncommitment than will subjects in the Hard Moderate group. The number of statements placed in the latitude of noncommitment for each subject in the Hard Moderate group and the Soft Moderate group were ranked together and a Mann-Whitney U was derived. The same procedure was followed for the number of categories used in the latitude of noncommitment.

Table 3 shows that subjects in the Soft Moderate group placed a larger number of statements (mean = 19.92) in the latitude of noncommitment than did subjects in the Hard Moderate group (mean = 12.35). A Mann-Whitney U of 52.5 where $n_1 = 12$ and $n_2 = 17$ indicated that the difference in number of statements in the latitude of noncommitment for the two groups was significant at the .025 level.

Table 3

Mean Number of Statements and Categories in Latitude of Noncommitment for Hard Moderate and Soft Moderate Subjects

	Mean Response			
	Hard Moderates N = 17	Soft Moderates N = 12	Mann-Whitney U	p
Statements	12.35	19.92	52.5	$<.025$
Categories	3.58	5.17	61.5	$<.05$

Source: Appendix E

A significant difference ($p < .05$) was also found as shown in Table 3 between subjects in the Soft Moderate group (mean = 5.17) and subjects in the Hard Moderate group (mean = 3.58) for number of categories used in the latitude of noncommitment.

The results displayed in Table 3 indicate that the observed difference between Hard Moderate and Soft Moderate subjects in frequency of statements and number of categories used in the latitude of noncommitment support the prediction that subjects in the Soft Moderate group will be noncommital toward more statements and categories than will subjects in the Hard Moderate group.

In order to provide information regarding the distribution of statements and categories into each of the 3 alternatives of evaluative patterning available to a subject (i.e., the latitude of rejection, noncommitment and acceptance), additional analysis was performed to investigate the use of statements and categories in the latitude of acceptance for Hard Moderate and Soft Moderate subjects. Table 4 shows the mean number of statements and categories accepted by Hard Moderate and Soft Moderate subjects.

It can be seen in Table 4 that Hard Moderate subjects accepted more statements (mean = 16.06) than did Soft Moderate subjects (mean = 11.00) and used more categories (mean = 3.70) in the latitude of acceptance than did Soft Moderate subjects (mean = 2.50). An unexpected finding shown in Table 4 is the magnitude of differences between Hard Moderate and Soft Moderate subjects in regard to statements and

Table 4

Mean Number of Statements and Categories in Latitude of Acceptance for Hard Moderate and Soft Moderate Subjects

	Mean Response			
	Hard Moderates N = 17	Soft Moderates N = 12	Mann-Whitney U	p[a]
Statements	16.06	11.00	52	$<.05$
Categories	3.71	2.50	37	$<.02$

[a]Two Tail Test
Source: Appendix E

categories placed in the latitude of acceptance. The difference as shown in Table 4 between Hard Moderate and Soft Moderate subjects in number of statements accepted was significant at the .05 level for a two tail test ($U = 52$, $n_1 = 12$, $n_2 = 17$), and the difference between Hard Moderate subjects and Soft Moderate subjects in number of categories used in the latitude of acceptance was significant for a two tail test at less than the .02 level ($U = 37$, $n_1 = 12$, $n_2 = 17$).

Additional analysis was performed to investigate the relationship between all three assignment groups--that is, Soft Moderate, Hard Moderate and Extreme groups--and evaluative patterning of the latitudes of rejection, noncommitment and acceptance for both statements and categories. Table 5 contains a summary of the mean number of statements placed in the latitude of rejection, noncommitment and acceptance

Table 5

Summary of Mean Number of Statements Placed in the Latitude of Rejection, Noncommitment and Acceptance by Extreme, Hard Moderate and Soft Moderate Subjects

	Mean Number of Statements		
	Latitude of Rejection	Latitude of Noncommitment	Latitude of Acceptance
Extremes N = 118	12.81	11.81	15.38
Hard Moderates N = 17	11.59	12.35	16.06
Soft Moderates N = 12	9.08	19.92	11.00

Source: Appendix E

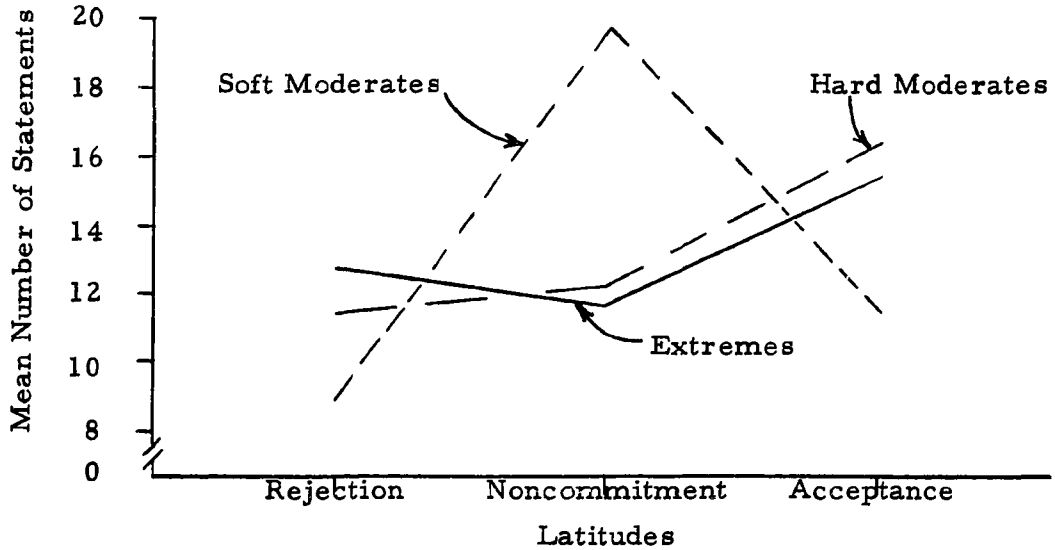


Fig. 2. Mean Number of Statements Placed in Latitude of Rejection, Noncommitment and Acceptance by Extreme, Hard Moderate and Soft Moderate Subjects.

Source: Table 5

by subjects in each of the three assignment groups. A graphic display of the summary of means in Table 5 can be seen in Figure 2. Notable in Figure 2 are first, the large number of statements placed in the latitude of noncommitment by Soft Moderate subjects and secondly, the similarity of distribution of statements by Hard Moderate and Extreme subjects across the 3 latitudes as compared to the distribution of statements by Soft Moderate subjects. It can be seen in Figure 2 that the relationship reported earlier that Hard Moderate subjects accepted more statements than did Soft Moderate subjects holds true for the relationship between Extreme subjects and Soft Moderate subjects. That is, both Hard Moderate and Extreme subjects placed more statements in the latitude of acceptance than did Soft Moderate subjects. It can also be seen in Figure 2 that Hard Moderate subjects placed more statements in the latitude of noncommitment than did Extreme subjects and that Extreme subjects rejected more statements than did Hard Moderate subjects.

Displayed in Table 6 are the mean number of categories used in the latitude of rejection, noncommitment and acceptance by subjects in the Hard Moderate, Soft Moderate and Extreme groups.

The summary of means in Table 6 is displayed graphically in Figure 3. Once again, as was the case with placement of statements, subjects in the Soft Moderate group revealed a relatively large latitude of noncommitment in comparison to Hard Moderate and Extreme subjects as shown in Figure 3. It can be observed in Figure 3 that both

Table 6

Summary of Mean Number of Categories Used in the Latitude of Rejection, Noncommitment and Acceptance by Extreme, Hard Moderate and Soft Moderate Subjects

	Mean Number of Categories		
	Latitude of Rejection	Latitude of Noncommitment	Latitude of Acceptance
Extremes N = 118	2.54	3.66	2.94
Hard Moderates N = 17	2.88	3.58	3.71
Soft Moderates N = 12	2.33	5.17	2.50

Source: Appendix E

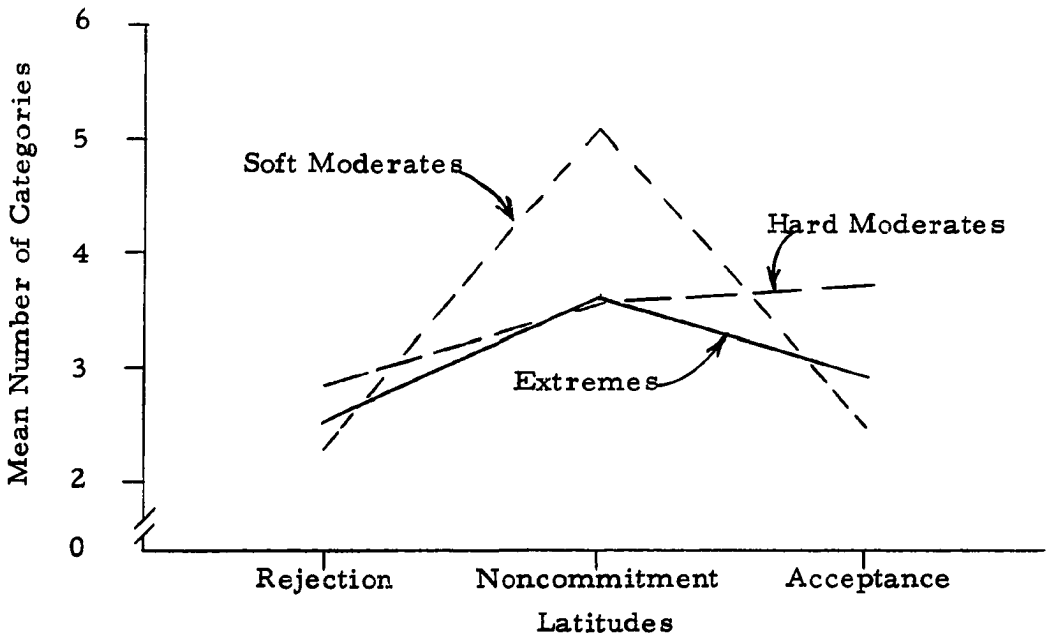


Fig. 3. Mean Number of Categories used in Latitude of Rejection, Noncommitment and Acceptance by Extreme, Hard Moderate and Soft Moderate Subjects.

Source: Table 6

Hard Moderate subjects (mean = 3.71) and Extreme subjects (mean = 2.94) used more categories in the latitude of acceptance than did subjects in the Soft Moderate group (mean = 2.50), a finding that is consistent with the results for placement of statements.

Recall that in the distribution of statements displayed in Figure 2 the Hard Moderate subjects placed more statements (mean = 12.35) in the latitude of noncommitment than did Extreme subjects (mean = 11.81). In the case of categories displayed in Figure 3 the relationship between Hard Moderate and Extreme subjects for latitude of noncommitment is slightly reversed. That is, as shown in Figure 3, the Extreme subjects placed slightly more categories (mean = 3.66) in the latitude of non-commitment than did Hard Moderate subjects (mean = 3.58).

It can be seen in the summary of means displayed graphically in Figure 3 that Hard Moderate subjects rejected more categories (mean = 2.88) than did Extreme subjects (mean = 2.54). This relationship is also reversed as compared to the graphic display of means in Figure 2 in which Extreme subjects rejected more statements (mean = 12.81) than did Hard Moderate subjects (mean = 11.59).

As shown in Figure 3, the overall relationship between Hard Moderate subjects, Extreme subjects and Soft Moderate subjects is relatively consistent with the results for placement of statements in that both Hard Moderate and Extreme subjects (a) rejected more categories, (b) were noncommital toward fewer categories and (c) accepted more categories than did Soft Moderate subjects.

An unexpected finding shown in Figures 2 and 3 was that subjects in the Hard Moderate, Soft Moderate and Extreme groups displayed a greater latitude of acceptance than latitude of rejection both in terms of statements and categories. This finding is in contradiction to the generalization reported in Sherif et. al., (1965) concerning systematic variations in latitude of acceptance and latitude of rejection in relation to extremeness of stand.

Recall that in the last section of the instructions given the subjects, those subjects that had 3 or more categories in their latitude of acceptance and/or 3 or more categories in their latitude of rejection were asked to designate the degree of acceptableness or objectionableness of those categories within their latitude of acceptance chosen as "also acceptable" and those categories within their latitude of rejection chosen as "also objectionable." An attempt was made to determine the extent to which the subjects choices of the degree of acceptableness and objectionableness of categories within the latitudes of acceptance and rejection were made naturally or were simply a product of the instructions provided by the experimenter.

On the post experimental questionnaire (see Appendix B) each subject with 3 or more categories in his latitude of acceptance and/or 3 or more categories in his latitude of rejection was asked the following questions concerning the latitude of acceptance and/or the latitude of rejection:

1. Did you feel that you were forced to make

distinctions that could not be made?

2. Did you feel uneasy about making the distinctions?

3. Did you feel that they were made simply because the experimenter directed you to make them?

If a subject had a negative or no answer to any of the 3 questions--that is, if the subject did not feel "forced," "uneasy" or "directed by the experimenter"--his response was labeled "natural choice." If an affirmative was given to any of the 3 questions--that is, if the subject did feel "forced," "uneasy" or "directed by the experimenter"--his response was labeled as "experimenter influenced."

The 3 questions noted above were asked concerning both the latitude of acceptance and the latitude of rejection. Responses to each of the questions were tabulated separately for the latitude of acceptance and for the latitude of rejection.

A total of 90 subjects including Hard Moderate, Soft Moderate and Extreme subjects had 3 or more categories in their latitude of acceptance. Focusing now on the latitude of acceptance it can be seen in Table 7 that a majority of the 90 subjects responded to each one of the 3 questions with a response that was labeled a "natural choice" response which indicates that for the most part the evaluative judgments of categories within the latitude of acceptance were made without a feeling of uneasiness or of demand on the part of the experimenter to make the judgments.

There were 67 subjects including Hard Moderate, Soft Moderate

Table 7

Per Cent of Subjects with a "Natural Choice" Response for Each of 3 Questions Concerning Demand Characteristics of Experimental Procedure

Subject Classification	N	Responses Labeled "Natural Choice" Question 1 Per Cent	Question 2 Per Cent	Question 3 Per Cent
Three or More Categories in Latitude of Acceptance	90	72.23	68.89	80.00
Three or More Categories in Latitude of Rejection	67	73.14	70.15	70.15

Source: Appendix E

and Extreme subjects that had 3 or more categories in their latitude of rejection. A majority of the 67 subjects made responses to each of the 3 questions that were labeled "natural choice" responses. In other words, for each of the 3 questions only 30 per cent or less of the 67 subjects with 3 or more categories in their latitude of rejection indicated that they did feel "forced," "uneasy" or "directed by the experimenter" when making choices of the degree of objectionableness of categories within their latitude of rejection.

CHAPTER IV

DISCUSSION

An important question relevant to drawing conclusions concerning the predictions made in the present study is the verity of judgmental behavior in categorizing positions within the latitude of acceptance as well as the latitude of rejection. The rough measurement employed to ascertain the degree to which such categorization was made naturally indicated that for the present sample at least, the distinctions were made with ease or naturalness by most of the subjects. In response to each of the 3 questions designed to assess possible demand characteristics of the instructions approximately 70 per cent of the subjects to which the questions applied indicated that they did not feel "forced," "uneasy" or "directed by the experimenter" in making the evaluative judgments of within-latitude categories. Further testing and elaboration of techniques are needed to comfortably assume fit of the apparent naturalness of response with fact.

A possible consideration concerning the response of those subjects labeled "experimenter influence" is that the difficulty they expressed regarding evaluative judgment of categories within their latitudes of acceptance and rejection may be due not to demand characteristics

of the experimental situation but rather to some other factor. That some subjects would reply that discrimination of categories within the latitude of acceptance or rejection is difficult while others report no difficulty suggests questions concerning possible conditions under which discriminations are made less easily. A lead to accurate formulation of such questions could be sought in investigation focusing on the relationship between level of personal involvement and difficulty in discriminating between categories within a latitude.

It is commonly observed in research on contrast phenomena in attitudes that an individual strongly committed to a stand on an issue will tend to perceive persons taking a middle position on the issue not as neutral but rather as "against us" or speaking more technically as further from the committed persons stand than the middle position actually is. Also, persons highly committed on an issue when allowed complete freedom of number of categories in which to sort statements on the issue tend to use significantly fewer categories than less committed persons. (Sherif & Reich, 1963) In other words, the person that is highly committed to his stand on an issue tends to see things relating to that issue in terms of "black and white." A relevant line of investigation would be to determine if highly committed persons who characteristically lump together stands as either "for us" or "against us" would also exhibit difficulty in differentiating stands within their latitude of acceptance and latitude of rejection.

Previous research (e.g., Hovland & Sherif, 1952; Vaughn, 1961;

Parrish, 1963; & Host, 1963) has shown that a characteristic response made by highly involved subjects when placing statements into the categories provided by the instructions is to pile up statements into the end position on the scale. On the other hand, less involved subjects have tended to distribute statements into less extreme categories and exhibit a more even distribution. In the present study the comparison of distribution of statements into the 11 categories by the Hard Moderate and Soft Moderate subjects revealed a trend by Hard Moderate subjects in the direction of placing a higher frequency of statements into the most extreme category on each end of the scale. Although no significant difference was found between the two assignment groups on individual comparison of number of statements in each of the less extreme categories, Soft Moderate subjects, by excluding statements from the two most extreme positions on each end of the scale did show a slight tendency to distribute statements into more of the less extreme categories.

The difference between the two groups in tendency to displace items into the extreme categories is consistent with the difference between the two groups in tendency to be noncommittal. Recall that the procedures for assessment of attitudes in the social judgment-involvement approach give an individual an opportunity not only to describe operationally what aspects of the issue he is "for" or "against" but also, an individual may designate any aspect of the issue he does not wish to take a stand on simply by not designating that particular part of the issue as "acceptable" or "objectionable." The individual, in other

words, can remain noncommittal on whatever aspect of the issue he wishes. Persons that are mildly committed to an issue or have little or no interest in an issue characteristically display a relatively large latitude of noncommitment in response to social judgment assessment procedures. (Sherif, et. al., 1965) It was found in the present study that subjects who displayed an evaluative "leaning" within their latitude of acceptance toward the side of the issue opposite their own stand were noncommittal toward significantly more categories and statements than were subjects whose evaluative "leaning" was toward the end position on their own side of the issue. In other words, Hard Moderates were willing to take a stand on significantly more statements and positions as being acceptable or objectionable than were Soft Moderates, and taking a stand on an issue implies commitment to that stand. The consistency of Hard Moderates and the consistency of Soft Moderates on the two indicators of commitment just discussed, that is, displacement of statements and noncommitment toward statements and categories provide support for the notion that a difference exists between subjects in commitment to a moderate position.

A significant difference between Hard Moderate and Soft Moderate subjects on number of categories and number of statements judged as acceptable provided additional evidence for considering Hard Moderates and Soft Moderates as having been drawn from two distinct populations. It was, however, quite unexpected that the two groups would differ significantly in number of statements and number of categories

accepted. The difference between the two groups in latitudes of acceptance was surprising because reports of previous research summarized in Sherif et al. (1965) have indicated that the latitude of acceptance varies little between highly involved and less involved persons and varies little in relation to location of the "most acceptable" position. That is, size of latitude of acceptance has not characteristically served to differentiate between persons holding a moderate or extreme position or between persons strongly committed to a moderate position from persons less committed to a moderate position. (Sherif et. al, 1965, Ch. 2)

While it is not within the scope of the present discussion to provide detailed conjecture concerning the inconsistency of present findings with previous research whose focus was not specifically that of differentiating between kinds of persons holding a moderate position, attention will be given to a source toward which to turn for a possible explanation of the unexpected differences.

The majority of findings summarized by Sherif et. al., (1965) have indicated that highly involved subjects tend to reject more statements than they accept. However, an investigation by LaFave & Sherif (1962), in which procedures similar to those of the present study were used to assess attitudes toward the desegregation issue, revealed findings that are in some respect strikingly similar to findings of the present study. LaFave & Sherif used the "own category" procedure for attitude assessment. In accordance with "own category" procedures, the subjects were instructed to sort statements into as many or as few

categories ranging from "most integrationist" to "most segregationist" as were judged by the subjects as necessary to differentiate the stand expressed in one pile from the stand expressed in another. (Sherif & Sherif, 1956, p. 528) Three groups of subjects who were publicly identified as representing differing stands on the issue of desegregation participated in the study. Important for the present investigation is the fact that one group of subjects were 144 white, male and female students from classes either in a state or private university in the Southwest. These subjects served as an "Unselected" sample which represented various shades of opinion on the issue. LaFave & Sherif found "that Unselected Ss more frequently have latitudes of acceptance equal to or larger than their latitude of rejection." (1962, p. 10)

The sample of subjects used in the present study represents essentially an "Unselected" sample similar in composition and in geographical selection to the sample used in the La Fave & Sherif (1962) study. The results of the present study concerning the apparent tendency by Hard Moderate, Soft Moderate, and Extreme subjects to accept more statements than they reject becomes less surprising after noting the consistency of present results with findings of the LaFave & Sherif (1962) investigation. Furthermore, the consistency between the LaFave & Sherif study and the present study provides a basis for conjecture concerning the significant differences between Hard Moderate and Soft Moderate subjects in number of statements and categories viewed as acceptable.

It became apparent from findings of the LaFave and Sherif study that a trend toward assimilation of statements and positions not noted in general for other issues has occurred for unselected white subjects with regards to the issue of desegregation or civil rights. In the present study an overall indication of assimilation effects was evident in 3 ways. First, subjects in all 3 assignment groups, which represented all persons in the present study who chose a position on the favorable side of the issue, were observed to accept a relatively greater number of statements and categories than they rejected. Secondly, Hard Moderate subjects showed a tendency to pile up statements into the favorable end of the scale. Finally, it was observed that while both Hard Moderates and Soft Moderates tended to accept more statements and categories than they rejected, Hard Moderates accepted significantly more statements and categories than did Soft Moderates.

It is apparent that for the present study the majority of assimilation on the part of moderate subjects can be accounted for in large part by subjects who have been designated in the present study as Hard Moderates. Furthermore, the significant difference between Hard Moderate and Soft Moderate subjects on statements and categories used in the latitude of noncommitment suggests that the difference in latitude of acceptance for the two groups is related to the tendency for Soft Moderates to be significantly more noncommital or in other words less involved.

Much of the preceding discussion has served to raise questions

concerning generalizations that can be made from the results of the present study. While it appears that the technique for attitude assessment used in the present study has possible promise for leading to a fuller understanding of attitudes on the issue to which it was applied, the technique's application to other issues and other instruments remains a question for further research.

CHAPTER V

SUMMARY

The purpose of the present study was to investigate the possibility of gaining a more adequate understanding of the theoretical and operational conceptualization of attitude proposed by Sherif and Hovland (1961) and Sherif et al., (1965) in the social judgment-involvement approach to attitude and attitude change. An extension of the existing procedures of attitude assessment was used to investigate the relationship between evaluative patterning of categories within the latitude of acceptance and the size of latitude of rejection and noncommitment.

The subjects, 147 students at Oklahoma University, were instructed to sort 40 statements regarding the social position of the Negro into as many or as few of 11 categories ranging from unfavorable to favorable. Each subject was asked to indicate his own stand on the issue by choosing the one category out of the 11 response categories which was "most acceptable" to him. Then each subject was also asked to indicate other category(s) "acceptable" to him, one category "most objectionable" and finally, other category(s) also "objectionable." Twenty-nine of the 147 subjects chose a moderate position as most acceptable and those subjects were asked to evaluate the categories

within their latitude of acceptance in terms of acceptableness relative to their "most acceptable" position, and to evaluate the categories within their latitude of rejection in terms of objectionableness relative to their "most objectionable" position.

The design involved classifying subjects according to the side of the most acceptable position that the "next most acceptable" category was located on. Subjects that chose a category in the direction of the end point on their own side of the issue were placed in the Hard Moderate group. Subjects that chose a category in the direction of the end point opposite their own side of the issue were placed in the Soft Moderate group. Of the 29 subjects that took a moderate stand on the issue, 17 were classified as Hard Moderates and the remaining 12 subjects were classified as Soft Moderates. The two groups were then compared on the relative size of the latitudes of rejection and noncommitment.

No significant difference was found between Hard Moderate subjects and Soft Moderate subjects with respect to number of categories and number of statements viewed as objectionable. Subjects in the Soft Moderate group (mean = 19.92) were noncommittal toward significantly more statements ($p < .025$) than were subjects in the Hard Moderate group (mean = 12.35). Also, Soft Moderate subjects (mean = 5.17) were noncommittal toward significantly more categories ($p < .05$) than were Hard Moderate subjects (mean = 3.58). Additional analysis was performed to gain information concerning the relative size of

latitude of acceptance for Hard Moderate and Soft Moderate subjects. A significant difference was found between the two groups for number of statements viewed as acceptable ($p < .05$) and for number of positions viewed as acceptable ($p < .02$). Hard Moderate subjects accepted more statements (mean = 16.06) than did Soft Moderate subjects (mean = 11.00) and used more categories (mean = 3.70) than did Soft Moderate subjects (mean = 2.50). A trend was noted for Hard Moderate subjects to pile up statements into the most extreme category on each end of the scale.

The results of the present study provide support for recent findings by Diab (1965, 1965a, 1965b) that have suggested that persons designated a "moderate" by the attitude assessment techniques of the social judgment-involvement approach are not a homogeneous grouping but rather may be differentiated as to commitment to their "moderate" position. Additional research is needed to determine the range of application to various issues of the techniques used in the present study for differentiating persons strongly committed to a moderate position from persons less committed to a moderate position.

REFERENCES

Bressler, J. Judgements in absolute units as a psychophysical method. Archives of Psychology, 1933, No. 152.

Campbell, D. T. The indirect assessment of social attitudes. Psychological Bulletin, 1950, 47, 15-38.

Diab, L. N. Some limitations of existing scales in the measurement of social attitudes. Psychological Reports, 1965, 17, 427-430.

Diab, L. N. Studies in social attitudes: I. variations in latitudes of acceptance and rejection as a function of varying positions on a controversial issue. Journal of Social Psychology, 1965, 67, 283-295. (a)

Diab, L. N. Studies in social attitudes: III. attitude assessment through the semantic differential technique. Journal of Social Psychology, 1965, 67, 303-314. (b)

Elbing, A. O. An experimental investigation of the influence of reference group identification on role playing as applied to business. Unpublished doctoral dissertation, University of Washington, 1962. Cited by Carolyn W. Sherif, M. Sherif, & R. E. Nebergall, Attitude and attitude change: the social judgment-involvement approach. Philadelphia: Saunders, 1965, pp. 53-54.

Fernberger, S. W. On absolute and relative judgements in lifted weight experiments. American Journal of Psychology, 1931, 43, 560-578.

Helson, H., & Nash, M. C. Anchor, contrast, and paradoxical distance effects. Journal of Experimental Psychology, 1960, 59, 113-121.

Host, Virginia L. Assessment of, and cognitive similarity in, prejudice. Unpublished tutorial, Chatham College, 1964.

Hunt, W. A., & Volkmann, J. The anchoring of an affective scale. American Journal of Psychology, 1937, 49, 88-92.

Hunt, W. A. Anchoring effects in judgment. American Journal of Psychology, 1941, 54, 395-403.

Johnson, C. S. Growing up in the black belt. Washington: American Council on Education, 1941. Cited by M. Sherif & Carolyn W. Sherif, An outline of social psychology. New York: Harper, rev. ed., 1956. pp. 499-500.

LaFave, L., & Sherif, M., Reference scales and placement of items with own categories technique. Unpublished manuscript. Norman, Institute of Group Relations, University of Oklahoma.

Long, L. A study of the effect of preceding stimuli upon judgment of auditory intensities. Archives of Psychology, 1937, No. 209.

Needham, J. G. Rate of presentation in the method of single stimuli. American Journal of Psychology, 1935, 47, 275-284.

Osgood, C. E., Suci, G. J., & Tannenbaum, P. M. The measurement of meaning. Urbana: Univ. of Illinois Press, 1957.

Parrish, Catherine E. Anti - Negro prejudice as a function of minority group membership. Unpublished tutorial, Chatham College, 1964.

Perloe, S. I. Status and judgment of occupational prestige. Unpublished paper. Cited by M. Sherif & C. I. Hovland, Social judgment: assimilation and contrast effects in communication and attitude change. New Haven: Yale University Press, 1961.

Pfaffman, C. An experimental comparison of the method of single stimuli and the method of constant stimuli in question. American Journal of Psychology, 1935, 47, 470-476.

Reich, J. W., & Sherif, M. Ego-involvement as a factor in attitude assessment by the own categories technique. Unpublished manuscript. Norman, Institute of Group Relations, University of Oklahoma, 1963.

Sherif, Carolyn W., Sherif, M., & Nebergall, R. E. Attitude and attitude change: the social judgment involvement approach. Philadelphia: Saunders, 1965.

Sherif, M., & Hovland, C. I. Social judgment: assimilation and contrast effects in communication and attitude change. New Haven: Yale University Press, 1961.

Siegel, S. Non-parametric statistics. New York: McGraw-Hill, 1956.

Tresselt, Margaret E. The effect of experiences of contrasted groups upon the formation of a new scale of judgment. Journal of Social Psychology, 1948, 27, 209-216.

Vaughn, Kathryn R. A disguised instrument for the assessment of intergroup attitudes. Unpublished Master's Thesis, Texas College of Arts and Industries, 1961.

Volkmann, J. Scales of judgment and their implication for social psychology. In Rohrer, J. H., & Sherif, M. (Eds.), Social psychology at the crossroads. New York: Harper, 1951, pp. 273-294.

Wells, F. L. A statistical study of literary merit, with remarks on some new phases of the method. Archives of Psychology, 1907, No. 7. Cited by M. Sherif & C. I. Hovland, Social judgment: assimilation and contrast effects in communication and attitude change. New Haven: Yale University Press, 1961.

Wever, E. G., & Zener, K. E. Method of absolute judgment in psychophysics. Psychological Review, 1928, 35, 466-493.

Whittaker, J. O. Report on research prepared especially for citation by Carolyn W. Sherif, M. Sherif, & R. E. Nebergall, Attitude and attitude change: the social judgment-involvement approach. Philadelphia: Saunders, 1965. p. 54.

Woodworth, R. S., & Schlosberg, H. Experimental Psychology. New York: Holt, rev. ed., 1954.

APPENDIX A

Forty Statements Used in Present Study with Median Scale Values and Category Range Derived in Pretesting by Host (1963) and Parrish (1963)

Item #	Statement	Median	Range
Positive Anchors			
3	Negroes are exciting and wonderful people with an interesting background.	10.68	1-11
6	The Negroes are morally right in their cause...and their equal rights as citizens cannot and should not be denied them.	10.68	1-11
11	The Negro in the U. S. has been historically a potent force for progress.	10.68	1-11
19	There should be no legal restrictions on physical and social contacts between Negroes and whites.	10.56	1-11
30	There is no conceivable reason why Negroes should not be integrated into our society.	10.68	2-11
Negative Anchors			
5	The whites need to protect their characteristics from what is regarded as the potentially degrading influence of Negro characteristics.	1.43	1-10
21	The Negro is pushing too hard and he wants too much too soon.	1.43	1-4
27	Family life and morals among Negroes are both different and lower than among whites.	1.43	1-10
31	The Negro Citizens are treated as second-class citizens because all too often that is what they are.	1.75	1-11
40	The Negro generally lives in the present with little thought for the future.	2.25	1-10

APPENDIX A (Continued)

Item #	Statement	Median	Range
Displaceable Items			
1	Negroes have few recreation places and these are not adequate nor well-equipped.	6.16	1-11
2	The main difference between Negroes and whites is a way of life, or cultural difference.	5.70	1-11
4	If racial discrimination in employment were abolished, deficiencies in education and skills would still be a barrier to Negro equality with the whites.	4.50	1-11
7	There are a few Negroes who would not know what to do with higher pay if they had it.	5.00	1-11
8	The Negro, too, has obligations to uphold.	6.34	1-11
9	It is difficult for the Negro to accept white customs and standards because they are often so different from his own.	6.16	1-11
10	Good housing should be provided for Negroes in their own part of town.	6.00	1-11
12	In the interests of integration, white children should be pulled out of the schools near their homes and put into mostly Negro schools.	6.16	1-11
13	Many Negroes can honestly say that they have never encountered crude forms of discrimination.	6.83	1-11
14	Satisfactory education can be provided in all-Negro schools.	3.83	1-11
15	Negroes always laugh and sing and never seem to have a care or a worry.	4.83	1-11
16	You can't just offer Negroes equal opportunities, you have to show them what to do with those opportunities.	6.00	1-11
17	It is up to the Negro to take advantage of the opportunities around him to become a real equal.	6.75	1-11

APPENDIX A (Continued)

Item #	Statements	Median	Range
18	Maybe sometime in the future racially mixed classrooms over a long period of years will provide a workable experience for both whites and Negroes.	8.16	1-11
20	Public schools should be attended according to the section lived in rather than according to race.	7.50	1-11
22	The arguments for and against segregated housing for Negroes and whites are about equal.	5.16	1-11
23	A white person should not be discharged to make room for a Negro.	5.83	1-11
24	It is unfortunate that the Negro business or professional man must depend upon his own group for his income.	6.00	1-11
25	Not all whites are better than Negroes.	5.75	1-11
26	It is an overstatement to say that if the Negro problem is not worked out, the country cannot survive.	4.75	1-11
28	Negro isolation is to some extent self-imposed, but it is fostered by the whites' attitude toward Negroes.	6.75	1-11
29	Negroes should be proud to be Americans.	6.38	1-11
32	The Negro is unable in many instances to find adequate employment, which results in a low standard of living.	5.00	1-11
33	The Negro population is increasing more rapidly than the population as a whole and may be expected to make up an increasing percentage of the total population.	5.83	1-11
34	It may be true that some Negroes are unclean but it is a result of the way in which they are forced to live.	7.25	1-11

APPENDIX A (Continued)

Item #	Statement	Median	Range
35	Negroes were at one time considered to be a subordinate and inferior class of beings.	5.70	1-11
36	Under some conditions Negroes should be admitted to white social clubs.	7.50	1-11
37	Much still remains to be done toward creating a feeling of self-respect in the Negro.	7.75	1-11
38	The torrent of Negro demands has caught many whites by surprise.	5.98	1-11
39	The Negro is hungry for a bigger share in the American plenty.	6.00	1-11

APPENDIX B

Experimental Questionnaire

I. Please fill out this questionnaire as quickly and as accurately as possible. If you have any questions concerning the questionnaire raise your hand and the experimenter will assist you.

Name_____(optional) Age_____ Sex M F

Student Classification_____Major_____

Home town and state_____

II. Indicate with a check mark the importance of the topic "social position of the Negro."

Not at all important							Extremely important

III. The following two questions apply only to those persons that had two or more stacks labeled with the word "acceptable" and/or two or more stacks labeled with the word "objectionable."

1. In the last part of the experiment when you were asked to indicate whether any one of the categories labeled "acceptable" was more acceptable to you than any of the remaining categories labeled "acceptable":

a) Did you feel that you were forced to make distinctions that could not be made?_____

APPENDIX B (Continued)

b) Did you feel uneasy about making the distinctions? _____

_____

c) Did you feel that they were made simply because the experimenter directed you to make them? _____

_____

2. In the last part of the experiment when you were asked to indicate whether any one of the categories labeled "objectionable" was more objectionable to you than any of the remaining categories labeled "objectionable":

a) Did you feel that you were forced to make distinctions that could not be made? _____

_____

b) Did you feel uneasy about making the distinctions? _____

_____

c) Did you feel that they were made simply because the experimenter directed you to make them? _____

_____

_____

IV. What per cent of the U. S. population is Negro? _____

What major city in the U. S. has the highest per cent Negro to white ratio? _____

In baseball who was the Negro athlete that won the Triple Crown in the American League and the Most Valuable Player in the National and American League? _____

Who is the newly elected Negro U. S. Senator (the first since 1871)?

_____

The first Solicitor General of the U. S. is a Negro and is currently serving at that post. What is his name? _____

APPENDIX B (Continued)

What government body struck down the "separate but equal" concept in public education in 1954? _____

Who married May Britt? _____

What are the names of the organizations represented by the following letters, and who at this time is the acknowledged leader of each?

Organization

SCLC _____ leader _____
CORE _____ leader _____
SNCC _____ leader _____

Who is the acknowledged leader of the Urban League? _____

Who is the acknowledged leader of the American Nazi Party? _____

_____

What was the date (year) of passage of the most wide sweeping civil rights bill? _____

V. Please indicate approximately how often you are involved in formal or informal discussion on the topic of civil rights?

_____

Not at all frequently — Very frequently

As a rough estimate, I spend about:

_____ hours per week discussing civil rights

_____ hours per month reading on the topic of civil rights

APPENDIX C

Unusable Subjects

Number Excluded	Reason for Exclusion
7	The patterning of acceptable and objectionable categories indicated that the subjects accepted and rejected both sides of the issue.
1	Two positions were designated as "most acceptable."
1	Two positions were designated as "most objectionable."
2	A latitude of acceptance was designated, but no latitude of rejection was designated.
1	A "most acceptable" position was chosen, but no "most objectionable" position was chosen.
1	A "most objectionable" position was chosen, but no "most acceptable" position was chosen.
3	A moderate position on the favorable side of the issue was chosen as "most acceptable," but the most acceptable position was the only category designated acceptable. Consequently, subjects could not be classified as a Hard or Soft Moderate.
1	The position of the statements was changed after the questionnaire was handed out but before the experimenter had collected the sorting.
17	Total

APPENDIX D

Number and Per Cent of Persons that Chose Each Position Out of the 11 Response Categories as "Most Acceptable"

Category			Number	Per Cent
Unfavorable end				
1			6	2.93
2	Unfavorable		7	3.41
3	Extreme and		4	1.95
4	Moderate Subjects		4	1.95
5			5	2.44
		Total	26	12.68
6	Neutral Subjects		15	7.32
		Total	15	7.32
7			6	2.93
8	Favorable		11	5.37
9	Moderate Subjects		12	5.85
		Total	29	14.15
10	Favorable		20	9.76
11	Extreme Subjects		98	47.80
Favorable end		Total	118	57.56
	Unusable Subjects		17	8.29
		Total	17	8.29
		Grand Total	205	100.00

APPENDIX E

Response of Subjects to Attitude Assessment Procedures and Experimental Questionnaire

Columns 1, 2, 3:	Subject identification.
Column 4:	Student classification: 1-Freshman; 2-Sophomore; 3-Junior; 4-Senior.
Columns 5, 6:	Age of subject.
Column 7:	Sex: 1-male; 2-female.
Columns 8, 9:	Information score: for questions see part IV of Experimental Questionnaire (Appendix B)
Columns 10, 11:	Frequency of discussion score: Eleven point scale ranging from "not at all frequently" (1), to "very frequently" (11).
Columns 12, 13:	Estimate of hours per week discussing civil rights.
Columns 14, 15:	Estimate of hours per month reading on topic of civil rights.
Columns 16, 17:	Importance of issue: Eleven point scale ranging from "not at all important" (1), to "extremely important" (11).
Column 18:	Subject classification: 1-Soft Moderate subject; 2-Hard Moderate subject; 3-Extreme subject.
Columns 19, 20:	Position chosen as "most acceptable."
Column: 21:	Position chosen as "most objectionable."
Column 22:	Number of categories in latitude of acceptance.
Column 23:	Number of categories in latitude of rejection.

APPENDIX E (Continued)

Column 24:	Number of categories in latitude of noncommitment.
Column 25:	Number of categories in which no statements were placed.
Columns 26, 27:	Number of statements placed in latitude of acceptance.
Columns 28, 29:	Number of statements placed in latitude of rejection.
Columns 30, 31:	Number of statements placed in latitude of noncommitment.
Columns 32, 33:	Number of statements placed in category 1.
Columns 34, 35:	Number of statements placed in category 2.
Columns 36, 37:	Number of statements placed in category 3.
Columns 38, 39:	Number of statements placed in category 4.
Columns 40, 41:	Number of statements placed in category 5.
Columns 42, 43:	Number of statements placed in category 6.
Columns 44, 45:	Number of statements placed in category 7.
Columns 46, 47:	Number of statements placed in category 8.
Columns 48, 49:	Number of statements placed in category 9.
Columns 50, 51:	Number of statements placed in category 10.
Columns 52, 53:	Number of statements placed in category 11.

00112410000----1131112216121810050013000010000008000 4
0022--2020101021131113260110920060406030103020204030 6
0032191100601051010814313191803070503060008000400050 2
00411820001----1131116302281200060200040006020505040 6
00511820101----1131132126130819100008000500000009000 8
00632010506--0611311121081921002100000000800000000 11
00722210103--0108311132152511040605000000040000050317
0081182020301021131114340121018040204030604050403010 4
00911820402--0211311112800811210803030205030401020108
0102192030902011131114232151114050600020309050004010 5

APPENDIX E (Continued)

```
011122201030204113111425009141710040403030403010302 03
012118200020101--20713440190111010202050311060202010 5
013118202100204113111226111101906040605010201040007 04
014117203010102113111224312151309060203000000030508 04
015118200080203103111360230200007030204010903000002 09
016118201------093101533019120907030402030502020102 08
017119203010103113111330520200011000005040000000503 12
018320102020210052093560016240007030303050203010304 06
019118201050105093111326017140908060201060301010103 08
020422103080602073111532118160606030705010300040302 06
021117200030100073101542016190509060202030302020206 03
022219201030102073112226117051802010100050204040504 12
023320201020102083112122606221208140000000000000408 06
02422010302--010731114232170914060603050003000304060 4
025120202050205113111227013151213020201010601010302 07
02611820001--011131114250010822050304050504040202 0204
027323202050002113115326012062205010302030306070503 02
028118102050305103111540220200006080300030001040 4 0308
029118200------112081524026100406010101010104080305 09
030117201010 1--113111137011092004040204020403040101 11
031219106050104102091335007122105050403020903020202 03
032118204010206113111452014320308050303040103020203 06
033320202010103113111326013072003020204040404040504 04
034118205020210103111431318190306000008060704000303 03
03522020104--020931013215201802170000000000000202120 6
036219109050107082071317009092209030605010303030303 01
037118101050106113111323327060703030402000100050006 16
038118108020001093102227008082403050305020206010307 03
039118109100201083111341318190310040400010300000705 06
040320104010104113101232410220807080700000300000505 05
04111720207--041131113350171319070303010203010304050 8
042219108102010093111235109112005020200010406060305 06
043118303040101092083425016071703050303030405060303 02
04421920101---- 093101650023170003020303061403020102 01
04522010201--041131112270140620030302010307030103060 8
046219203010102073109332330070313050100000202010107 10
0471182010802--103111224313180913060300000003010205 08
048219102080520082093334122120602010202010601000907 09
0491--201050103103111326016121210020101020304010103 12
050320102060101073111335012111707020203050402030402 06
051220104020101041092224310092100050406020400060607 00
052218201------103111126211111810050101010000010307 11
053219201020101083117216210102002000104050601070200 03
0541182050801--093101434015141108030203030602040302 04
055118203060101082087434020101001010402050404060404 05
056124105040203113115043020060606010103030203030204 13
057118201010001083111325112141412020100030303040203 07
```

APPENDIX E (Continued)

```
058118105090105113111227008112107040303020405020205 03
059219204010101063105450218220000040403050602060406 00
060226211010104033111343108221011040304030502000301 04
061118201020002102072225210111905060005040303000407 03
062119200082030103111250417230012030402010300000000 14
063119105030209083111236013091804030401010501040404 09
064119101030008103111226111032602010001020405080703 08
065111903030010103115325117041906020202020700030102 13
066220106020101103101227005082704040504020502060203 03
067117206100304113111340420200004040007050900003000 08
068118200060100092081442120140602050403030300050404 07
069218205030000072092343108161604050403000703020203 07
070118200010200113109334120110902070605000102040407 02
071120108070106093111324225060806030304030303010304 07
072119201070101103111434019111005040305020603030301 05
073219101030101073111434018091304010404040203040503 06
07421920203--0507310133410919120507020307060100010206
0751--1000701011010812171050431050407040204000304050 2
076219104090210073111322414170913000400040504000500 05
077119110090409071081443013141301040608030403050102 03
078422102060103103101323313101705050700030704000005 04
079421102020101093112333218121008070003020302000503 07
080118201040103103111214411141514050500000400000106 05
081118202030103113111322420130710030200000050002081 0
08222010305--0011311131521410161903030701020001020011
083118102040105093111217116061806030201000103060504 10
084118200020103083111344018121005050101020205010507 06
085118100030200091091236012062201030302020503050705 04
08611810301----1131113251141313060507000107010105040 3
087118201050202103111124409041708060300000600000206 09
088118202050101113111530325150003050007040600070001 07
089118203010202113111225210092104080500030400030303 07
090118201050006080283424114081801020404110404060300 01
091223103010000051081227008082403040405040103050402 01
09211820301--0111311112531619151306030400000003020306
093118201010102113112318013022503020202030304030705 06
094118101040102113111432216200411030504000001020403 07
095119201060305103111132519170413000000000103000103 19
096219103010000112111354014151108030501010702010501 06
097118201010000113111222527100308020002000800000001 19
09811920001--0211311112621313141305000302000102010409
099219105040110083111225211101910040200040503050500 06
10042120206----0831014322181309010006060005040506060 1
101118103010101111091223414115070140306060000000000 00
10242210310----1131111145131017100004000006000304001 3
103118206100310113111332317150812020001060203000005 09
104219108050105101071218006030103050503050403020303 05
105220205050203113101412421109010070000000200000205 05
```

APPENDIX E (Continued)

```
1061182020703121131113206291100060502000008000000019
107-19206010103113111335015180710060201020102010101111
1081181070501041031113251081715040103031306020202004
1091181001102011131112306152500150005000006000030012
1101182010501030931114340181210050502020203030101061O
1111182020201010831013152100624060307060005020005030 2
1121182010101011131112270100723020505020103020204070 8
1131181050200010910822261100822030404040404060402050 0
1141181020100001110916320250708020404040107040202020 8
1151182040901--113111321513171009080000100006000400 03
11621920105--0509311123421217100705020501000004040210
1171181050704010920912252080824200404000303000803060 5
1181181040101030431022261100218070606010401040200070 3
1191182010200010931121280120721050704020101010308040 4
12012420102----103111 22431006240302020003150005000307
1211182010201011031111253141610110202000100000305021 4
1221182030101021131114142191110050403050206030303010 5
1232191050102051020817400291100020205060204040204050 4
1241-- 2011000041131114322211306080503010000020305050 8
12511820301--011131113260220513020102030401020703051 0
1261181100100000831014430121414100204070504050204030 3
1272192010100000520714250130621030301020503030405040 7
128320203--020510207132331711120600050510050100020006
12911820101--011131113206221800120000000612050000000 5
1301182020101011031033501411150602030106020204030704
1313202020803061031134340210910066060402030202020303 6
1322201030801010031111370041026010405040702030503020 4
1332182050401020931115312191704030707020004000102021 1
1341182030401011010942270071716041502020201020403030 2
1351191030503--113111424120041601010003030503070606 05
1362191050301020731113260051520050304060505030302020 2
1371182030201020910912441081517010303080705050403000 1
1382--200010314113113315214052100000502030602080404 06
1391182030601021131114232170914060603050003000304060 4
1402191061001--113111233415170812020305030000000300 12
1411181020401011131111109251500150000000000000000002 5
1421181010100010931113350090922020303070406030403020 3
1431182000602050031114340111613040606050303020203040 2
1441182000201020931014250141115040704040401020202030 7
1451182020301050831117400291100030302050404050503030 3
1461182000602051131114340111613040606050303020203040 2
1471182000201020931014250141115040704040401020202030 7
```