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THE EFFECT ON ATTITUDE CHANGE OF COGNITIVE DIFFERENTIATION AND AFFECT, UNDER CONDITIONS OF NORM-PRESENTATION WITH AND WITHOUT COUNTER-ARGUMENTS

by
Walter Hobson Crockett

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THE EFFECT ON ATTITUDE CHANGE OF COGNITIVE DIFFERENTIATION AND AFFECT, UNDER CONDITIONS OF NORM-PRESENTATION WITH AND WITHOUT COUNTER-ARGUMENTS

by

Walter Hobson Crockett

"Attitude" is defined as a cognitive-affective orientation regarding some object. The cognitive component is viewed as a set of expectations about the object. These expectations are accompanied by varying degrees of affect. Change in attitude is seen as resulting from modification of the affect or of the expectations. One source of pressure toward change is awareness of deviation from a group to which the individual belongs. Such deviation leads to re-evaluation of the cognitive-affective complex.

The following hypotheses are tested:

1. Subjects who are shown that they deviate from an attractive group will modify their attitude toward the group norm. Change will be still greater if they are given a supporting rationale for the norm.

2. Individuals who relate a large number of expectations to the object will change less than those who relate only a few expectations.

3. Individuals with a large amount of affect associated with the attitude will change less than those with little associated affect.

4. Individuals who are positively attracted to the group will change more than those who are neutral or negative toward the group; and individuals who perceive themselves as deviant will change less than those who think they agree with the group.

Experimental manipulations were as follows: Students in eight classes were asked to indicate their position regarding segregation. Measures were obtained of the number of expectations related to segregation, of the amount of associated affect, of the attractiveness of the group, and of the difference between the individual's position and the norm he attributed to the group.

A month later each class was divided into three groups. A control group again indicated their position without experimental influence; a norm-presentation group indicated their position after being told of an anti-segregation norm; and a counter-argument group indicated their position after being told the norm plus a feedback of reasons supporting the norm.

Results were as follows:

Hypothesis 1 was confirmed in part. Change was greater among counter-argument subjects than among control group subjects. However, norm-presentation subjects did not differ significantly in change from subjects in the other variations.

Hypotheses 2 and 3 were confirmed in specific experimental variations. Cognitive factors predicted change in the control group but not in other variations. Affect predicted change in the counter-argument group but not in other variations.

It is suggested that the arguments led to a defensive reaction among subjects with high initial affect. When a defensive reaction was not present the cognitive factors predicted best.

The relationship between cognitive factors and change was present in reverse among anti-segregation control group subjects. Such individuals may have perceived some merit in the segregation position, and the negative change may have resulted from reconciling conflicting expectations.

Hypothesis 4 was not confirmed; there was no relationship between attraction to the group or perceived deviation from the group and attitude change.

In line with these results, modifications are suggested in the theory, and a number of additional experiments of a more precise nature are sketched out.

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I am indebted to the members of the staff of the project, all of whom gave criticism and encouragement throughout the study. The experimental design was worked out in a series of meetings with Dr. Helen Peak and Dr. John W. Atkinson, and was revised through discussions with Dr. Daniel Katz, Dr. Roger W. Heyns, and Dr. Edith Bennett. Dr. Katz and Dr. Peak have contributed greatly to the interpretation of the results, as well as to the design of the experiment. John S. Caylor, Earl R. Carlson, Stewart E. Fliege, Milton J. Rosenberg, and Robert S. McCargar also contributed greatly to the conceptualization and analysis. I am greatly indebted to Dr. Virgil Thompson, Dr. Ronald Slay, and Mr. Ralph V. Smith, who allowed valuable class time at Michigan State Normal College to be taken up by the administration of the experiment. Ralph V. Smith was especially co-operative in making arrangements for the experiment. Milton J. Rosenberg and Robert S. McCargar served as leaders in the experimental variations. Dr. Clyde H. Coombs and Keith Smith were of great aid in offering statistical assistance at numerous points in the design and analysis of the experiment. To all of these I want to express my sincere appreciation.

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CHAPTER I

INTRODUCTION

This thesis is the report of an experiment in attitude change. An attempt was made to develop a theory of attitudes, and to test certain derivations from this theory which predicted change in attitudes. Before presenting the theoretical system and the experimental report, however, a brief discussion of previous experiments and conceptualizations in the area is required.

A. Brief History of the Attitude Concept

Probably no single concept in social psychology has received more attention than the concept "attitude." G. W. Allport has said, "The concept of attitudes is probably the most distinctive and indispensable concept in contemporary American psychology. No other term appears more frequently in experimental and theoretical literature" (2). Similarly, social psychologists who approach the field from the area of sociology have been highly concerned with attitudes as explanatory concepts (7, 19, 55).

Despite this general agreement as to the importance of the concept, or perhaps because of it, there has been a marked lack of agreement as to the meaning which will be given the term. Nelson, for example, cites twenty-three definitions which had been given the term up to 1939 (38). It cannot be said, however, that the definitions have been completely independent. As Sherif and Cantril have pointed out, "One feature is common to them all: that an attitude.... denotes a functional state of readiness which determines the organism to react in a characteristic way to certain stimuli or stimulus situations" (47).

This agreement, however, is of a general sort, and the specific

individual phenomena which will be included as elements of the attitude concept have varied widely. Furthermore, as Strauss has pointed out (53), much of the research on attitudes has had little to do with attitude theory itself. Instead, the emphasis has often been a practical one, such as the attempt to determine whether or not a particular type of attempted influence will elicit a change in attitude for a group of individuals. There is no intention here to disparage the action research orientation that has often been taken, but to point out that there is another approach to the analysis of attitude change, namely one which attempts to specify the elements which will be postulated as significant for the attitude concept. Once such elements are postulated, change may be predicted from the effect on these elements of various types of situations.

Sherif and Cantril have said, "there is as yet no recognized psychology of attitudes with basic concepts applicable to all cases of attitudes. In large part this may be due to the fact that the term attitude, although useful as an empirical and composite term, is not yet delineated by underlying psychological concepts" (48, p. 19).

The fact that attitude research has often lacked systematic coordination with attitude theory does not mean that there have been no attempts to develop a theory of attitudes. As a matter of fact, theoretical treatments of attitudes have been made in the past few years by such theorists as Krech and Crutchfield (29), Newcomb (40), Sherif and Cantril (47, 48) and a number of others. The theoretical sections of this thesis will rely heavily on these sources. The point that requires stressing is that empirical research, particularly in the areas with which this experiment deals, has frequently been only peripherally related to theory.

B. Brief Survey of Attitude-Change Literature

Since the experiment reported in the following chapters is con-

cerned with attitude change, it will be worthwhile to give examples of some of the studies that have been made in the area of change in attitudes. A number of publications exist in which experiments in attitude change have been discussed in some detail (2, 38, 44, 47, 48, 53, 60). Therefore, an effort will be made to confine this section to studies which have direct relevance to the experiment that was conducted.

Experiments will be discussed under four major headings. It should be emphasized that this classification into four areas is one of convenience rather than one which isolates the major variables that were manipulated in the various studies. It is not unlikely that studies which are grouped together in this summary as being phenotypically similar, would be classified differently if their genotypic variables were isolated.

1. Attitude change as a function of additional symbolic material about the object of the attitude: Research in this area has been concerned in considerable part with "propaganda": with change in attitude as a function of acquaintance with symbolic presentations that are predominantly favorable or unfavorable to a given object. It should be noted that the appeals to the individuals affected by the propaganda may be emotional as well as cognitive. In point of fact, the emotional appeal has often bulked relatively larger than the cognitive in the attempts to induce attitude change.

Among the earlier studies of this type was one by Thurstone, which showed that attendance at movies which were favorable or unfavorable to certain groups produced a reliable and persistent change in attitude toward these groups (53).

A similar study was conducted by Remmers, this time using written rather than pictorial propaganda (42). He found that the reading of

information about an issue produced modifications in attitude, particularly if the content was discussed after reading.

Ken Ching Chen, in an experiment conducted a short time after the invasion of Manchuria by the Japanese, found that lectures which were slanted in either a pro-Japanese or a pro-Chinese direction produced changes in attitudes in the direction of the argument (23).

Carrying such an analysis a little further, Hovland, Lumsdaine, and Sheffield, in the American Soldier series (25), report that the presentation and discounting of information opposing the point of view that the propagandist favors produces more change than simply presenting the propagandist's point of view alone. This finding held true, however, principally for subjects with a fairly high educational attainment.

An interesting finding by Collier merits attention in this connection (14). Collier found that subjects who had examined Nazi propaganda in terms of a set of critical standards of judgment became slightly more pro-Nazi than a control group which did not read the propaganda. Collier indicates that the effectiveness of the propaganda despite the critical approach of the subjects may be interpreted in terms of the type of opinions which the subjects originally entertained regarding the Nazis. That is, when the subjects had relatively confused and contradictory opinions about the Germans, exposure to material which supported favorable opinions was sufficiently effective to strengthen them. This study suggests that one determinant of the value of propaganda in effecting attitude change is the amount of information which the individual has about the object of the attitude, and the extent to which the information is integrated in a logically consistent fashion.

The studies described above are selected from an extremely large

body of literature. It should be pointed out that results from a great many investigations are by no means as clear-cut as these. However, the studies cited indicate that under certain conditions, which are as yet incompletely understood, it is possible to change attitudes toward objects by providing symbolic material which is opposed to the viewpoint of the subjects, material which was previously unfamiliar to them, or material which strengthened certain opinions of the subjects at the expense of other, conflicting opinions.

However, there is little information in the studies concerning the reasons why some subjects are more receptive to propaganda than are others. Many of these experiments grew out of a practical orientation. The experimental problems were "Will propaganda change attitudes?" or "Is it desirable to offset counter-propaganda when initiating a propaganda campaign?" There was little or no interest in investigating the determinants of attitude change within individuals.

2. Attitude change as a function of direct experiences with the object of the attitude: A number of experiments have demonstrated that change in "unfavorable" attitudes toward an object can be effected by placing subjects in situations in which the object of the attitude is seen in a favorable light through direct experience.

For example, F. Tredwell Smith led students at Columbia University on a conducted tour of Harlem, in which they met Negroes of a high intellectual level in surroundings which were designed to be favorable. This tour led to modifications of the attitudes of the students in the direction of greater favorableness toward Negroes, and the modifications held up over a period of time (50).

Similarly, the I. and E. Division of the Army reports in the

American Soldier series that working with Negro soldiers in a combat unit led white soldiers to be much more receptive to the practice of combining Negro and White troops in the same unit (52). An interesting aspect of this study is that the change in attitude took place only among soldiers who were in bi-racial units, and did not take place in other units which did not have such a policy. Similar results have been obtained with respect to reduction of attitudes favorable to segregation as a result of inter-racial housing (17), and in other areas.

The common theme of these and similar studies is not only that individuals are in interaction with previously-disliked groups of individuals but that the interactions are on a basis of relative equality. Under conditions of relatively equal status, it appears that individuals with unfavorable attitudes are in a position to perceive favorable aspects of the disliked group, and consequently undergo a modification of attitude.

3. Attitude change as a function of suggestibility: Studies in this area have centered around the somewhat controversial question of suggestibility. An experiment by Lorge (33), for example, showed that the ratings which subjects made of socio-political statements varied according to the individual's orientation toward the author to whom the statements were assigned. Similarly, Moore (36) found that subjects changed their judgments in the fields of linguistics, ethics, and music according to judgments that the experimenter said were made by a group to which the individual belonged. These findings and others (8, 13, 45) were interpreted as indicating a trait of "suggestibility" among subjects.

However, this interpretation has been subjected to severe criticism by such authors as Asch (3), Berenda (6), Duncker (17), Hertzman (5), and Lewis (31). In general, these authors hold that the phenomenon is

found chiefly when (1) the individual has little information regarding the object at hand, and consequently accepts the judgment of a group or an expert as being more valid than his own; or (2) when the stimulus may be interpreted from a number of different points of view, depending on the other stimuli associated with it. An example of the second case is the differing meanings assigned to political slogans when such slogans are applied to politicians of widely differing viewpoints. These investigators cite a growing number of experiments which indicate that man is not infinitely suggestible. They hold that the theory of suggestibility implies a form of unintelligent conformity on the part of the subject. They feel that the processes underlying "suggestibility" may be better interpreted within a more rationalistic theory which would attempt to explain the attitude change observed in such situations in terms of attempts to fit the situation into a meaningful whole.

4. Attitude change over time as a function of group norms: A final type of investigation which will be mentioned here includes those studies which point out the modification of attitudes when individuals are associating in groups whose norms differ from the person's own attitudes.

Often quoted in this connection is the study by Horowitz (24) in which he found that negative attitudes toward Negroes were not a simple function of interaction with individual Negroes. In fact, he found no relationship between the attitudes of school children toward Negroes and the number of their personal experiences with individual Negroes. Instead, the conclusion which he reached was that "attitudes toward Negroes are now chiefly determined not by contact with Negroes, but by contact with the prevalent attitude toward Negroes" (p. 35).

Newcomb (29) followed the modifications of the attitudes of a group of college students over a period of time. He found that the major-

ity of the students modified their attitudes consistently throughout the four years of college, and that the modification was in the direction of group norms. Deviates from this group norm were individuals who did not fit in with the group, or individuals who deviated consciously in certain areas because of close ties with other groups.

It should be pointed out that these studies differ from the investigations cited in the three previous sections in that they deal with gradual modifications of attitudes over time. Their importance for purposes of this thesis consists in the fact that they point to the importance of group norms in the development and change of attitudes.

Discussion: A large number of experiments in attitude change have been eliminated from discussion in this chapter. To cite only one example, the great amount of literature on attitude change as a function of group discussion has not been included in this chapter. The reason for these omissions is that the experiment which is reported in the following chapters dealt principally with the variables of group norms and the presentation of material designed to familiarize the individual with characteristics of the attitude object.

In brief summary of the findings outlined above, there is evidence that attitude change may take place:

(1) as a result of symbolic material--pictorial, spoken, or written--to which the individual is exposed and which disagrees with information on which the individual's attitude is based, or which supplies information in a field in which he is not well informed;

(2) as a result of direct experiences with the object of the attitude which contradict information which the individual entertains regarding the object, or which enable the individual to perceive other aspects of the

object;

(3) as a result of becoming familiar with the position of a known group or a prestigeful individual with respect to the attitude object. This may (a) lead the individual to allign his position with that of the respected individuals regarding objects about which he has little information, or (b) lead him to perceive the object in a different context from that used originally;

(4) as a result of interaction with other individuals whose attitudes are predominantly in opposition to the individual's attitude with respect to the object, or who provide the individual with additional information regarding a relatively unknown object.

CHAPTER II

THEORETICAL CONSIDERATIONS

It has been indicated in the previous chapter that the concept "attitude" has been used in connection with a number of different types of investigations and from a number of different points of view. Before proceeding with a discussion of the experiment, it would seem appropriate to indicate the way in which the concept will be used in this study, and the theoretical system from which the hypotheses are derived.

Definition: An attitude will be defined as a more-or-less enduring cognitive-affective orientation with respect to some object. By orientation is meant the tendency to direct responses to the object in a favorable or unfavorable manner. "Object" is used as a generic term encompassing, for various attitudes, such things as material objects, ideologies, people, behaviors, and so on. "Enduring" implies persistence over time.

It will be seen that the principle units of the concept as it is used here are cognition and affect. Since much that follows will be concerned with attitudes as intra-personal variables, a somewhat extended theoretical treatment of cognition and affect is in order.

Before this treatment is begun, two points should be made. First, in spite of the increasing number of investigations in the field, there is not sufficient experimental evidence to make possible a complete specification of the elements which combine to form cognitions or affect. Consequently, the theoretical treatment will be somewhat general in nature. In the absence of experimental evidence, it is probably preferable to refrain from too specific a theory in order to allow for modifi-

cations in the theoretical system as future experimental results indicate.

The second point to be made prior to the analysis of the cognitive and affective components of attitudes concerns the question of what, precisely, is being analyzed. It should be emphasized that we are considering attitudes, for the moment, as constructs which are postulated to exist within the individual. Later in this chapter we will consider the relationship between an individual's attitudes and the points of view of groups in which he associates.

The cognitive and affective components of the concept will be discussed separately.

Cognitive Component of Attitudes: The type of cognitive theory employed herein is patterned after theoretical statements by Postman (41), Hilgard (23), Bruner (9, 10), and others (30, 59). The elements of this theory are expectations or hypotheses which develop around environmental objects. These expectations may be looked upon as assessments of probability. The individual may be viewed as perceiving environmental objects in terms of the probability that they will have such-and-such characteristics, or be related to one another in various ways.

Suppose there is an attitude item "All Negroes are ignorant." As viewed by this approach, a person who marks the item "agree completely" would assess the probability of any Negro's being ignorant as 1.00. A person who marks the item "disagree completely" would assess the probability of every individual Negro's being ignorant as 0.00. Individuals who fall between these extremes would assign varying intermediate degrees of probability to the statement, say 0.60, 0.40, and so on.

This type of theory has been supported by a large number of experiments in the general area of social perception. To cite only one

example, Bruner and Postman (11) report that subjects who view playing cards at extremely small time exposures perceive hearts and diamonds as being red in color, clubs and spades black, even though a trick deck of cards is in use in which some spades and clubs are red, some hearts and diamonds are black. The subjective probability that the customary colors will be reversed is practically zero. The exposure time must be increased greatly before previous expectations are overcome and the proper suit-color combination is perceived.

Similar expectations probably exist for most, if not all, environmental objects which are important to any degree in the individual's life. It is functional for the individual if his predictions about environmental objects are as accurate as possible.

It is necessary for the individual to perceive situations in terms of patterns of objects; i.e., to consider environmental objects in relation to one another, rather than as separate, isolated entities. One object may be perceived in a number of different ways, depending on the other objects which coexist with it in the situation. A group of bottle caps, for example, may serve the function of checkers, or money, or ornamentation, as well as that of sealing soft drinks. The point of this example is not that the object may fill different functions, but that the expectations about the object change as the objects with which it is associated change.

The discussion to this point has centered around physical objects, and expectations about such objects must be considered in the development of a theory of attitudes. However, we are at least as much concerned with interpersonal relations; with attitudes of individuals toward other individuals and groups. It is interesting that the studies in perception and cognition heretofore carried out have been concerned largely with perceptions of physical objects, words, and similar phenom-

ena, rather than with perceptions of other people. One major reason for this is probably that the complexities of an experimental investigation may be reduced by dealing with objects less complex than orientations toward groups, individuals, and ideologies. Still, it should be possible to follow a type of expectation theory in approaching the study of attitudes toward other individuals and groups. Such will be attempted in the following.

It is assumed that, over a period of time, the individual develops expectations regarding physical objects, individuals, groups and ideologies. Expectations toward any particular object are assumed to be interdependent. An inter-related set of expectations toward an object may be considered as the cognitive component of the attitude toward the object.

One dimension along which the cognitive aspect of attitudes may be expected to vary is with respect to the number of expectations that are related to any particular situation, and the qualitative complexity of these expectations. This aspect of the cluster of expectations will be termed cognitive differentiation. In general, the greater the number of expectations related to an object, the greater the cognitive differentiation.

It is possible for an individual to consider an object in terms of a large number of expectations all of which are qualitatively similar according to some criterion. For example, an individual may view Negro segregation exclusively in terms of unfavorable Negro characteristics, such as dirtiness, immorality, belligerence, and so on. Another person may consider the same object with respect to a number of qualitatively different expectations; e.g., he may view segregation in terms of Negro characteristics, democratic ideology, community results, personal experiences, real

estate prices, and so on.

While the quantitative number of expectations for the two individuals may be the same, the number of qualitatively different categories of expectations may differ markedly. This dimension of qualitative complexity of the cognitive component of attitudes will be termed the range of cognitive differentiation, or simply the cognitive range. It is expected that individuals will vary in the breadth of cognitive range that they entertain with respect to an object, and that any one individual will differ in breadth of cognitive range from one object to another.

It has been assumed that the expectations that an individual brings to bear on any particular situation are in some degree interdependent, and combine in a complex fashion to form the resultant orientation. Change in the cluster of expectations may come from (1) addition of new expectations and/or elimination of old; and (2) restructuring of existing expectations.

A further assumption that will be made is that there is, at least in this society at this time, a stress toward consistency in expectations such that subjective inconsistency in expectations leads the individual to re-assess his orientation toward the target to the end of entertaining a mutually consistent complex of expectations.

Probably some discussion of consistency is in order, lest the assumption seem too abstract. There is no intention to imply that individuals necessarily operate in such a fashion as to be logically consistent as judged by some objective criterion. Nor is there an implication of necessary avoidance of ambivalent orientations. Rather, consistency is defined in a purely subjective sense. The assumption is made that individuals who realize that their expectations toward an object are mutually contradictory are motivated to modify these expectations in the

direction of consistency. This may be done through a re-examination of the complex of expectations and the elimination of certain of the conflicting expectations; or it may be accomplished by an elaboration of a more complex set of expectations in which the previous contradictions are retained as sub-categories of a larger, ambivalent complex. It may be suggested that one of the functions of psychoanalysis is the elaboration of a number of more complex sets of expectations into which previously repressed expectations may be integrated in a subjectively consistent manner.

Defining consistency in subjective terms also denies any implication that an individual's cognitive orientation toward one object must be similar to his orientation toward another object which, to an outside observer, may appear quite similar to the first. The number of objects in an individual's phenomenal world over a period of time is extremely large. It has been postulated that individuals develop expectations with respect to significant objects and the relationships between these objects. Implicit in this assumption is the idea that individuals develop some scheme of classifying objects into categories. Considering the wealth of objects that require categorization, the probability is high that objects which are similar according to one criterion may be perceived subjectively in different categories on the basis of another, different criterion. To the extent that the individual does not interact with the two objects under conditions in which the criterion on which they are similar is important, no subjective inconsistency need exist, and there need be no stress toward consistency.

Thus, the configuration of anti-Negro liberalism may be subjectively consistent. To the extent that a set of expectations of Negro inferiority are consistently reinforced, it is possible for anti-Negro beha-

vior and humanitarian ideology to coexist for the same person with no subjective feeling of inconsistency.

Change in the cognitive component of an attitude may be discussed in terms of the above theoretical outline. A person who is asked to respond to an item on an attitude questionnaire, such as whether or not he favors segregation, views this situation in terms of complexes of expectations about the various elements of the situation. Almost inevitably his expectations about Negroes as a category of environmental objects will be brought into consideration. These expectations may (or may not) be modified by his expectations regarding a number of other environmental objects, such as humanitarian beliefs, the norms of other individuals with whom he is acquainted, the community conditions that he feels will result from segregation practices, and so on.

It has been assumed that these expectations combine in complex fashion to influence the orientation that is revealed in his response to the item. Changes in the orientation, resulting from changes in the expectations, may come about as a result of at least the following processes:

(1) Reduction in the probability of certain of the expectations. It has been said that expectations are functional for the individual to the extent that they make the environment predictable for him. Suppose that an expectation or set of expectations fail to predict the actions of some object. It is held that such a phenomenon would lead to the elimination of the expectation in question or to the introduction of new expectations which modify the existing set.

(2) Acquisition of new expectations. Acquisition of new expectations probably comes about by greater familiarity with the object, or by communications with others which introduce new aspects of the object to the individual. To the extent that these new expectations differ from

those previously entertained, the orientation will change. It is anticipated that the introduction of new expectations will affect the orientation of individuals who previously entertained only a few expectations regarding the object more than those who had a high degree of cognitive differentiation originally.

(3) Application to the object of expectations previously held, but not specifically related to it. Thus, if the anti-Negro liberal mentioned above is faced with the task of reconciling his anti-Negro orientation with his humanitarian ideology, subjective inconsistency may be expected, and a change in orientation toward Negroes, or a modification of the ideology would be expected to result. In this instance, the amount of change would probably be influenced by the amount of cognitive differentiation previously held about the two objects, and by the degree to which subjective consistency had already been achieved.

(4) Inconsistency of expectations. It is assumed throughout that subjective inconsistency of expectations will result in (a) change in orientation, or (b) modification of certain of the inconsistent expectations, or both.

(5) Introduction of new objects into the situation. This condition may be considered as a special case of (3) above. The prototype of the condition is the bottle-cap illustration given on page 11 of this thesis. Another example is typified by the differences in orientation toward Negroes of certain Whites, depending on whether they perceive the Negro as taking the role of inferior or of equal.

It is apparent that this theory is in accord with the position taken by Asch, Duncker, et al with respect to the suggestibility question raised in Chapter I. These investigators see individuals as being suggestible when (a) they have little information about the object, or when (b) it is possible to view the object in a number of different contexts. In

our terminology, (a) an individual who has few expectations about an object may defer to the orientation of others with whom he expects to agree regarding a number of other objects. (b) Knowing the orientation of an individual or group with whom he expects to agree (or disagree) regarding an object may lead the individual to relate to the object a different set of expectations than those used originally. If this object is one which is not sufficiently ambiguous for this individual to be categorized with respect to more than one set of expectations, and/or if it is one about which he entertains a large number of expectations, change would not be expected to take place.

Affective Component of Attitudes: Affect will be defined conceptually as being roughly synonymous with emotional arousal. Although the affective and cognitive components of the attitude concept are treated separately in this presentation, the separation is made for analytical simplicity, not because the theory holds that the two aspects are completely independent. On the contrary, it is likely that expectations are often accompanied by varying degrees of affect from their beginning.

The simplest model for such an expectation-affect combination is probably the reward-punishment model. Expectations develop through experiences, direct or vicarious, with environmental objects. To the extent that these experiences are rewarding or punishing, a certain amount of positive or negative affect becomes associated with the expectations.

This combination of affect and expectations probably takes place in a rather complex fashion. In the development of attitudes toward individuals and groups, the rewards and punishments are often rewarding or punishing with respect to motives such as acceptance, or achievement, or ego-support, rather than the simple drives such as hunger, thirst, or physical pain. While the combination of affect and expectations may be

expected to occur, it is often difficult to specify exactly the motive which is being rewarded or punished.

Also, many expectations are not acquired through direct experience with the object, but through interaction with other individuals whose orientation toward the object is observed and who communicate to the person their own expectations regarding it. Thus, the affect may become associated with the expectations as a result of an anticipation of reward or punishment from the object, even though there have been no direct experiences which might lead to such an anticipation.

A further source of affective loading of a set of expectations toward an object concerns the tendency for individuals with considerable repressed hostility toward close associates to project this hostility upon groups with which they have had little contact. This phenomenon has probably been most extensively studied by Frenkel-Brunswik and her associates (1, 21). In the light of their findings, it may be assumed that, for some individuals, the displacement of hostility from one environmental object to another contributes to the magnitude of the affective component of certain of their attitudes.

The experimental measure of affect that is most commonly used in attitude studies is the question "How strongly do you feel about this issue?" Such a question may not be expected to yield any insight into the dynamics of the affect. For the person who responds "very strongly", only a more detailed investigation will be able to ascertain whether this affect derives from personal experience with this and related objects, from information about the object gathered from other sources than direct experience, from displaced hostility, or from other possible sources. The most that can be said is that some constellation of factors operates in such a way as to make the individual's attitude more affect-laden than

that of another person who marks the item "not strongly at all."

Since this study did not make use of techniques for uncovering repressed hostility or other indices of displaced affect, there is little reason at this time to analyze in detail the dynamics of such factors. Instead, the assumption will be made that a relatively large affective component associated with an attitude will cause that attitude to be more resistant to change than an attitude with a relatively low affective component.

It should be pointed out that there is no necessary relationship between cognitive range and affect or between cognitive range and attitude position. Furthermore, while there may be a relationship between affect and attitude position, this relationship is not expected to hold for all subjects. Since these variables have been hypothesized by some investigators to be related, some theoretical elaboration of this point is in order.

(a) The relationship between cognitive range and affect: French (20) reports a negative relationship between cognitive differentiation and intensity. Her interpretation of this relationship is that individuals with high affect either repressed or failed to learn expectations which disagreed with the approach or avoidance orientation that the individual maintained. Thus, individuals with little cognitive differentiation were individuals whose ego-defenses necessitated a uni-valent orientation toward the object--in this case religion.

French gives no indication as to how her subjects were analyzed with respect to differentiation. Laying aside methodological issues, however, it is possible to question the generality of her findings. It has been mentioned previously that ego-defenses may be expected to function as sources of affect, and that repression may serve as a mechanism in reducing the breadth of cognitive range. Nevertheless, these processes are

not expected to apply to all people's orientations to all objects. Rather, the negative relationship between breadth of cognitive range and amount of affect would be expected to hold only for individuals who are making use of particular ego defenses, and for objects which serve as foci for such defenses. Consequently, from a fairly large population it should be possible to find (1) individuals for whom the relationship between cognitive range and affect is negative, because of the operation of defense mechanisms; (2) individuals with broad cognitive range and high associated affect, who have been motivated to become well-informed on the issue; (3) individuals who have a wide cognitive range but who do not associate a high degree of affect with this object; and (4) individuals whose experience with the object has been minimal, and who are characterized by both low cognitive range and slight affect.

(b) Relationship between cognitive range and attitude position: With respect to attitude position and cognitive range, also, French found a correlation which requires explanation by this theory. French's finding was that subjects who had little cognitive differentiation tended to fall at one extreme or the other of the attitude scale. This again follows from her theory that defensiveness and differentiation are related. Those whose orientation toward religion served as an ego defense tended to be either extremely religious or extremely anti-religious, and to repress or discount any expectations that contradicted their own orientation.

Once again one wishes that French's method of analyzing individuals by amount of cognitive differentiation were available. Nevertheless, it may be argued that this relationship would not be expected to hold universally over a large population of subjects. There should be subjects at each extreme of attitude position who entertain expectations regarding the target which oppose their point of view, but who offset

these expectations with others which are, for them, more appropriate.

Furthermore, the fact that a set of expectations regarding some object is overwhelmingly of favorable or unfavorable nature does not signify that this set of expectations is necessarily characterized by a narrow cognitive range, at least as that concept is used in this theory.

For example, of two individuals, one may be highly impressed by a certain model of automobile, and entertain a preponderantly favorable set of expectations regarding it. The second may be somewhat unimpressed by the model and entertain more unfavorable than favorable expectations regarding it. The mere fact of attitude position toward the automobile does not necessarily indicate which of the two will have the broader cognitive range. The first individual may be impressed only by the appearance of the automobile, in which case we might say that his cognitive range was narrow, or he may know in detail the car's performance capacity, its construction, the characteristics of the engine, the details of gasoline consumption at various speeds and so on, and he would be considered as having a broad cognitive range. A similar analysis could be made for the individual who was unimpressed by the automobile.

Consequently, it may be hypothesized that for individuals whose orientation toward a target object serves primarily an ego-defensive function, we may expect a negative relationship between extremeness of attitude position and breadth of cognitive range. However, for individuals who are not ego-defensive with respect to this object, an opposite relationship might hold, and in a large population there should be no clear relationship between cognitive range and attitude position.

(c) Amount of affect and attitude position: A large number of experimenters (22, 26, 54) have reported a positive relationship between extremeness of attitude position (whether favorable or unfavorable) and

amount of affect. There is no intention here to deny this finding. It should simply be pointed out that the relationship is by no means a perfect one. In all of the investigations reported, there have been individuals at extreme positions with little associated affect, and individuals in central positions with much associated affect.

Group Membership Aspect of Attitudes: One area of attitude theory that has been explored in some detail is that which concerns the relationship between the attitudes of an individual and the norms of groups to which he belongs. There is abundant evidence in support of the postulate that attitudes are learned within a group context, and that the norms of a group often serve as the "reality" against which an individual's perceptions are checked. For a large number of environmental objects there do not exist objective measuring devices which aid the individual in ascertaining the characteristics of the objects. It is suggested that group norms serve in lieu of such objective yardsticks, and if objective criteria are readily available, the norms are likely to support them.

For example, if a boy from one racial group is beaten up by a boy of different racial background, the incident may be interpreted in a number of different ways. The interpretation that the aggressive act represents the natural brutality of all members of the second racial group is only one of several interpretations. However, to the extent that there are, in the first boy's group, hostile norms with respect to the second group, the interpretation of racial brutality is likely, and the incident may serve to affirm the "correctness" of the norms.

So it may be assumed that an individual's expectations toward many environmental objects develop through communication within his own group as well as through direct experiences with the object in question.

Not only do groups serve as sources of reality against which to

test perceptions, but they also serve a reward function for the individual. That is, it may be assumed that for most individuals there are certain needs which are satisfied chiefly through interpersonal relationships; through group membership. The individual is early conditioned to the rewards of friendship and affection.

Group membership is rewarding for other reasons than the satisfaction of desires for affection. Groups frequently serve as mediators of rewards, such as material opportunities or social prestige, and provide a social reality which, to the extent that it aids the individual in forming dependable expectations, is rewarding.

It is of some importance, then, that the individual's relationships to groups which are of importance to him be maintained in fairly harmonious fashion. To recapitulate, the importance of harmonious interpersonal relationships derives from the fact that the individual is rewarded by certain types of inter-personal relationships; it derives from the fact that groups mediate certain material and social rewards, and from the fact that group norms represent a social reality against which individual perceptions may be checked and verified.

However, the groups with which an individual is in contact are not ecually important as sources of reward. Instead, it is often the case that certain groups may be considerably more rewarding than others. Such groups have been termed "positive reference groups." Newcomb (40) suggests that among the factors determining which of the groups an individual belongs to will become positive reference groups are the attractiveness of the members and of the goals which are mediated by the group.

The point of this discussion is that such groups probably exert considerable influence on the individual's attitudes. Let us suppose that an individual holds to an attitude which is opposed to the attitude of a

large number of members of a positive reference group. Suppose, further, that the object of this attitude is relevant to the goals of this group. In such a case, experimental findings indicate that the individual will be subjected to pressure toward change, or will be rejected by the group (18). In the light of such findings, it may be concluded that one source of pressure on an individual toward attitude change is that which comes from groups which are sources of attraction for him, and whose norms are not in agreement with his own attitude position.

It is held that attitude change in such circumstances does not come about automatically, particularly if the attitude is one with considerable cognitive range and affective intensity. Instead, in line with the theory espoused in the preceding sections, the individual is faced with the problem of reconciling conflicting expectation-affect complexes. The conflict may result in one of several alternative situations, among which four may be mentioned: (1) The alteration of the first attitude in the direction of conformity to the group's norm; (2) the continued espousing of the original attitude in the face of possible rejection by the group; (3) a solution in which the original attitude is retained as a private orientation, and resistance to the group norm is not publicly evidenced; and (4) rejection of that group as a positive reference group for the individual.

It would be possible to undertake an analysis of the determinants of each of the alternative solutions. However, such an analysis would be quite involved, and is tangential to the issue at hand. Suffice it to say that one source of pressure toward attitude change comes from the individual's perception of the disparity between his attitudes and the norms of groups which are positive reference groups for him.

Assumptions and Hypotheses: The theoretical orientation and

some of the hypotheses deriving from the system may be summarized in the following set of assumptions and hypotheses.

Assumption 1: There exist for individuals expectations--considered as assessments of probability--about the characteristics of environmental objects and the relationships between objects. These expectations are interdependent in such a way that stability in one is supported by stability in the others, and change in one effects a change in others. All expectations regarding an object need not be equally interdependent.

Assumption 2: The expectations about an object influence the individual's orientation toward that object.

Assumption 3: Stability of expectations derives from

a) the accuracy with which the expectations predict the behaviors or functions of the object; i.e., the greater the accuracy, the less the susceptibility to change.

b) the amount of affect--considered as anticipation of reward or punishment--associated with the object; i.e., the greater the affect, the less the susceptibility to change.

c) the number of expectations with which the one in question is related; i.e., the greater the number of associated expectations, the less the susceptibility to change.

Assumption 4: There is a stress for consistency of expectations such that subjective inconsistency produces a tendency to modify the set of expectations toward subjective consistency.

Assumption 5: Expectations develop in considerable part through the individual's communication with close associates, and are affirmed or challenged by such communications.

Assumption 6: Individuals are motivated for various reasons to belong to certain groups, and one factor that may endanger the individual's

acceptance by groups is disagreement regarding certain objects.

Hypotheses:

1. Since stability of expectations is a function of the number of expectations entertained regarding the object in question (2c), then

those individuals who have few expectations about an object should change their orientation toward the object more easily than those who have relatively many such expectations.

2. Since stability of expectations is a function of the amount of affect associated with the expectations (2b), then

those individuals who have little affect associated with the expectations should change their orientation toward the object more easily than those who have relatively much affect.

3. Since stability of expectations is a function of the accuracy with which the expectations predict the behaviors or functions of the object (2a), then

the reduction in predictability of an expectation or set of expectations should make change in orientation less difficult.

4. Since expectations regarding an object are interdependent (1), and since there is a stress for consistency of expectations (3), then

a) individuals who feel their expectations about the object to be inconsistent should change more readily than those who do not entertain subjectively inconsistent expectations, and

b) the introduction of new, conflicting expectations into a set of expectations regarding a particular object should produce change in the expectations and consequently change in the orientation.

5. Since expectations develop in considerable part through communications with associates (5), and since individuals are motivated to

belong to certain groups, then

> the realization by an individual that he differs from other members of a group to which he is attracted, regarding some object which is of importance within the group, should lead to change in expectations in the direction of those communicated by other group members, and consecuently to change in orientation.

6. Since attitudes are expected to change as a result of change in expectations (Hypotheses 1, 3, and 4), as well as from divergence from group norms (Hypothesis 5), then

> individuals who are made aware of their own divergence from group norms and who are also offered alternative expectations about the object should change more than individuals who are subjected to only one of these influences.

CHAPTER III

METHODOLOGY

This chapter will be concerned with describing the experimental manipulations used in the experiment, and the operations used in measuring the variables. The chapter will be divided into three parts. The first part will describe the operational measurements used, the second part will deal with the experimental manipulations, and the third will consist of an operational restatement of the hypotheses.

A. Operationalization of Concepts

1. Attitude item: It was necessary to decide which of the many possible attitude areas should be used for the attitude change, and to devise a technique which would make possible a ranking of subjects on a continuum from positive to negative with respect to the object.

Some of the hypotheses centered around the influence upon attitude change of cognitive range and of amount of affect. Consequently, it seemed logical to focus attention on an area that was socially controversial in order that extremes of intensity and cognitive range, as well as extremes of attitude position, might be represented. The issue of Negro segregation was considered to be such an attitude area, and was chosen for this study.

Once the attitude area was delineated, the question of devising a scale which would rank subjects in order of favorableness-unfavorableness became important. The attitude scales customarily used follow either the Likert (32) or the Thurstone (56, 57) technique of scale construction. These methods have in common the use of a fairly large number of items. The individual's reaction to each of these items is averaged or otherwise manipulated to produce a total score based on all of the items. This score is considered to be the individual's attitude toward

the issue in question. The theoretical utility of such scales, especially when applied to change experiments, may be questioned on at least two grounds

First of all, such techniques are used as estimates of "general attitudes" such as Attitude toward Negroes, or Attitude toward Internationalism. However, we are dealing with a specific situation, and we have conceived of the individual as having expectations regarding each phenomenologically relevant object within the situation. When he conceives of a certain object in relation to another, there should be an interaction between the expectations of the two, leading to some resultant orientation. Consequently, with respect to specific situations, the individual's orientation need not derive simply from his expectations about Negroes as a group; expectations about a number of other elements of the situation may be equally important. While it may be fruitful to consider the individual as holding certain general attitudes, his orientation toward specific hypothetical situations is a function of expectations regarding all of the objects in the situation which seem relevant to him.

Secondly, the use of multi-item scales to ascertain an individual's attitude to a specific situation means that the attitude is estimated on the basis of a sampling of the subject's attitudes toward the elements of the situation. This is a justifiable technique as long as it is specifically recognized that the concept "attitude" has thereby been defined as meaning the individual's orientation toward a sample of the elements. However, to say that the person's score represents his attitude toward the situation is to make the assumption that the items on the scale represent an adequate sample of that individual's expectations regarding the elements of the situation which seem relevant to him. For any

one person the score may represent a distortion of his attitude owing, first, to the fact that the elements sampled may not be equally important for him; and, second, to the fact that the items may not have included elements which, for him, are crucial to the situation.

Despite these assumptions, the fact remains that a great deal of valuable research has been conducted by experimenters using these scaling techniques. Nevertheless, we do not know the extent to which the assumptions are valid, and it was decided to use a scaling technique in which the assumptions were held to a minimum. Consequently, only one item was used to distinguish between individuals with respect to their attitude toward segregation. The item used was the following:

> Suppose you lived in a residential area from which Negroes were excluded by agreement of landowners. One of the landowners wishes to sell his house to a Negro. After considerable discussion it is decided that the final decision as to whether to allow the Negro to buy the house will be made by a vote of the residents in the area. How would you vote?
>
> _____ I can think of no conditions when I would vote to allow the Negro to buy the house.
>
> _____ Under most conditions I would vote against allowing him to buy the house, but under some conditions I might vote to let him buy.
>
> _____ I think it would be a toss-up as to whether I would vote to allow him to buy or not; it would be about a 50-50 choice.
>
> _____ Under most conditions I would vote to allow him to buy the house, although under some conditions I might vote against letting him buy.
>
> _____ I can think of no conditions when I would vote against letting him buy the house.

Subjects were asked to rank the alternatives to this item. Their first and second choices were then used as a basis for breaking subjects into groups. Using the Coombs' unfolding technique (15, 16) it was possible to arrive at eight categories of respondents, ranging from unfavorable to favorable.

Subjects whose first and second choices were not adjacent alternatives were considered to be operating on some other scale than the

one used by the majority of the subjects, and their responses were not included in the analysis. Of the 214 subjects who responded to the first questionnaire, only 14, about 6%, gave non-scale responses. Of the 181 subjects who responded to the second questionnaire, eight, about 4%, gave non-scale responses. Thus, out of 395 responses, 22, about 6%, were non-scale. Of these twenty-two non-scale responses, three subjects checked the most extreme anti-Negro item as their first choice; thirteen gave the next-most extreme anti-Negro item as their first choice; one gave the neutral item as his first choice; four gave the next-most extreme pro-Negro item as their first choice; and one gave the most extreme pro-Negro item as his first choice. One subject whose response was non scalar checked the first, third, and fifth alternatives as his first choices and the second and fourth as his second choices--a type of response that defies analysis. It may be seen that there was a slight clustering of non-scale responses around the anti-Negro end of the continuum. However, these responses constituted such a small proportion of the total population that it was not felt that their omission would introduce any marked distortion into the results.

Since the control group in the experiment responded to the item on two occasions separated about a month in time, it was possible to obtain an estimate of the reliability of the item. The rank order correlation coefficient for the two sets of responses to the item was .79, which is an acceptable test-retest reliability coefficient.

2. Cognitive Differentiation: To test the hypotheses having to do with cognitive differentiation and cognitive range, it was necessary to rank subjects on the basis of the total number of expectations that they brought to bear on the issue, and on the number of categories into which their expectations fell. The problem was that of determining what

expectations the subjects entertained regarding segregation, and the solution to the problem is a difficult one. To quote Krech and Crutchfield on this matter,

> "What is needed is the most intensive, searching, and prolonged investigation of cognitive contents, and there is no short cut to this goal. The contents of an individual's beliefs and attitudes about a single object.... might be so detailed and complex as to require many hours to describe. And not only is it necessary to ascertain the contents and the clarity of the contents, it is also important to ascertain the structure of relationships of this belief and attitude with other beliefs and attitudes that the individual holds, i.e., to determine how specific or how generalized, how isolated or how interconnected this belief or attitude is" (29, p. 248).

It was impossible to obtain as detailed a report of the subjects' expectations as Krech and Crutchfield recommend and at the same time to use enough subjects in the experiment to make possible statistical comparisons between variations. Consequently, it was decided to ask subjects to spend a limited amount of time in writing responses to an open-ended question about the issue. The question used was the following:

> Many factors may have been involved in the decision you have made on this question. We realize that it might take a long time to write out all of these, but we are asking you to put down as fully as possible all the things that you considered in making this decision. Please elaborate these considerations as fully as possible, and do not simply restate your decision. Write on the back of this page if necessary. You will have eight minutes for this.

It was assumed that the information given in this limited time, while not complete, would present a sample of the most important expectations which the subjects entertained regarding the object, and that the time limit was long enough that each subject would be able to present a considerable number of expectations.

These responses were then coded for amount of differentiation. Since the hypotheses regarding cognitive range demanded that the expectations be coded into categories, a system of categories was developed from the responses. Eight categories of responses were included:

1. Ideological Considerations: expectations that fit the issue into some broader area, in which principles of association with man are of importance in making the decision. This means specific statements that principles operate. Such things as the traditional democratic ideology, Christianity, Fascist ideology, and so on were coded in this category.

2. Universal Rules for Acceptance: In this category were coded responses in which the individual sets down rules which he feels should apply to everyone who wishes to move into his residential area.

3. Negro Characteristics (Negative): Here were coded negative expectations regarding Negroes.

4. Negro Characteristics (Positive): In this category were coded favorable characteristics which Negroes were expected to possess.

5. Community Results of Non-Segregation and of Segregation: This category was concerned with the expected effects, positive and negative, of Negroes moving into the area.

6. Personal Experiences: The relating of an incident of personal experience was coded in this category. Each incident, in its entirety, was coded as one expectation. Any conclusions specifically drawn from the incident were coded in their appropriate categories.

7. Action Possibilities: Specific statements of the kind of thing that should be done to cope with the problem of segregation.

8. Self-characteristics: Under this heading were coded characteristics of the subject personally which he saw as related to his position on the question.

Each statement was coded in the appropriate category, although a statement which was repeated was not coded twice. Thus, it was possible by counting the number of categories into which an individual's expectations were coded to obtain an estimate of that individual's cognitive range. By counting all of the coded expectations, regardless of the categories into which they fell, it was possible to get an estimate of total differentiation.

One problem which arose was the extent to which verbal ability contributed to the score which an individual received on the measure of total differentiation. Presumably those individuals who were most facile

at writing would receive a higher rank than those who were less fluent verbally. While this was true for total differentiation, it was not so true of the cognitive range measure. That is, an individual who responded to the item with fifteen statements could, conceivably, receive a cognitive range of one, and an individual who responded with five statements could receive a cognitive range score of five. Since the relationship between verbal ability and rank on cognitive differentiation would seem to be reduced by the code for cognitive range, this was the measure which was used in the analysis of experimental results.

3. Amount of Affect: To measure the affective, or intensity component of attitudes, the traditional question "How strongly do you feel about this issue" was used. In addition, another question was employed: "How much do you care whether or not Negroes can buy property in residential areas occupied by Whites?" Subjects were asked to pick their first and second choices of the four alternatives used in each of the questions, so that it was possible to unfold responses and obtain six categories of respondents for each of the intensity items.

The two items correlated highly ($p=.001$, $tau=.41$), and neither of the measures is significantly related to attitude change when the other is held constant, although both are related to change when taken separately. Consequently, it may be said that, for purposes of predicting change, there is no reason to pick one of the measures over the other, and that either or both may be used as indicating amount of affect associated with the attitude.

4. Other measures used as predictors of change: In addition to the items on intensity and cognitive range, four others were included in the questionnaire. These were (1) the individual's perception of the group norm; (2) the individual's perception of the attractiveness of the

group as a whole; (3) the amount of action the subject would take in implementing his point of view; and (4) the amount of trouble he would have in deciding how to vote.

(a) Perception of group norm: After they had filled out the attitude item, subjects were asked to pick the alternatives which they thought most of their fellow students would choose as first and second choices for this item. Thus, it was possible to ascertain for each subject the position at which he perceived group consensus, and the discrepancy between his own attitude position and this perceived consensus, that is, the difference between his position and that of the group, was considered to be his "perceived deviation" from the group.

(b) Reference group: Subjects were asked to respond to the following question "Describe the student body at Ypsilanti Normal College. What kind of a group is it? Compare the students here with students in other colleges you may know about." These responses were coded into three categories: (i) positive--subjects who described their fellow students in favorable terms; (ii) neutral--subjects who were about equally favorable and unfavorable, or whose responses were not clearly either favorable or unfavorable; and (iii) negative--subjects who described their fellow students in negative terms.

(c) Conflict question: Subjects were asked to pick their first and second choices from the alternatives to the following item:

How much trouble would you have in deciding how to vote?
_____A very great deal.
_____Some, but not a great deal.
_____Very little.
_____None at all

Since there were four alternatives, it was possible to designate six categories of respondents on the item.

(d) Telic (action) question: Subjects were asked to pick their

first and second choices from the alternatives to the following item:

> How much work would you be motivated to do to aid in convincing others as to the correctness of your first choice on question 1?
>
> _____I would do no work at all.
> _____At most I might discuss the matter with personal friends who disagreed with me, but I would do no other work.
> _____I might type and address letters to residents, but I would not organize committees, make personal or telephone calls, or solicit funds.
> _____I would work on projects of talking and writing to residents, but I would not help in the organization of committees, or in soliciting funds.
> _____I would aid in organizing committees to make personal calls or residents, to make telephone calls, to write and mail letters to residents, and to solicit funds to finance the campaign.

The responses on this item were unfolded to produce eight categories of respondents.

B. Experimental Manipulations

1. Population: Subjects in this experiment were students in seven classes at Michigan State Normal College, Ypsilanti, Michigan. Six of the classes were in the Sociology Department; the seventh was in the Education Department. Although one of the classes was a course in research methodology, the majority of the students had little experience with social science research, and had not previously served as subjects in experiments. No demographic material was collected for any of the students. However, examination of the school records and interviews with faculty members indicates that the students are of predominantly lower-middle class backgrounds and intend to enter the field of teaching.

A sizeable proportion of the students commute from industrial communities near the college, or return to their homes for the week-ends. This is reflected in the concern shown by faculty and student leaders over the lack of "school spirit" and the low participation in student activities. While this fact might be expected to work against hypotheses bearing on the importance of relevant reference groups for attitude change,

it also might be expected to minimize the amount of communication among subjects regarding the experiment.

2. Description of the experiment: In order to provide continuity to the report, the experimental manipulations will be described chronologically.

a. Initial Measurement: During the latter part of March and the first of April, 1952, the initial questionnaires (Appendix I) were administered to all of the classes. At that time subjects were told that they would receive a report of the results of the experiment in about a month. Subjects were identified only by code numbers.

The first questionnaire included, in addition to the items mentioned above, an administration of the Need Affiliation test (49). However, the conditions of administration of this test were such that the data were not sufficiently precise to warrant their use in the analysis.

b. Experimental Manipulations: Certain of the six hypotheses presented in the preceding chapter were not tested experimentally, but set the conditions for experimental manipulations. Two such hypotheses are numbers five and six which state:

> Hypothesis 5: The realization by an individual that he differs from other members of a group to which he is attracted regarding some object which is of importance within the group should lead to change in expectations regarding the object, and consequently to change in orientation.
>
> Hypothesis 6: Individuals who are made aware of their own divergence from group norms and who are also offered alternative expectations about the object should change more than individuals who are subjected to only one of these influences.

In line with these hypotheses, one experimental group (the norm-presentation group) was selected in which subjects were told that the majority of students were pro-Negro in their orientation, and consequently were opposed to segregation. Subjects in this group were told no reasons supporting this position. A second group (the counter-argument group)

was presented with identical group norms, but was also given an extensive list of reasons supporting this position. These two groups were compared to a third, control group which received neither of these experimental influences.

The two hypotheses which set the criteria for the material that was included in the counter-arguments were hypotheses three and four which state:

> Hypothesis 3: ....the reduction in predictability of an expectation or set of expectations should make change in attitude less difficult.
>
> Hypothesis 4: ....a) individuals who feel their expectations about the object to be inconsistent should change more readily than those who do not entertain subjectively inconsistent expectations, and b) the introduction of new, conflicting expectations into a set of expectations regarding a particular object should produce change in the expectations and consequently change in the attitude.

Consequently, the counter-argument presentation (Appendix II) was designed in such a way as to deny, or contradict unfavorable expectations regarding Negroes; to stress the importance of democratic ideologies while pointing out the ideological inconsistencies between discrimination and democratic values. Investigations were cited wherever possible to bolster the argument and to negate the unfavorable expectations. All of these arguments were cast in a framework which purported to be a feedback of reasons given by the students for supporting the pro-Negro, anti-segregation position.

Subjects were assigned to the three groups in such a fashion that the groups would be made of subjects at roughly the same attitude positions. Each of the seven classes was divided into three groups according to this criterion.

Three experimenters participated in the manipulations, and the three were rotated in such a way that each conducted two groups in each

of the three experimental variations. The three experimenters entered the classroom together. After an introduction by the instructor, the subjects were told that it was easier to present the material to smaller groups, and that the classes would be subdivided for that reason. The code numbers of subjects who were to go to each of the experimental variations were called off, and the groups went to separate rooms.

The experimental manipulations were as follows:

Counter Argument: In this variation subjects were told that 48% of the students had said that they would usually vote to allow the Negro to move into the area, 18% had said they would always vote to allow him to move into the area, 13% said it would be a 50-50 choice, 11% said they would usually vote against allowing the Negro to move into the area, and 10% said they would always vote against allowing him to move in. Thus, about two-thirds of the students were represented as being pro-Negro and about one-fourth as anti-Negro.

Following this, the subjects were given the detailed exposition of the reasons lying behind checking the anti-segregation alternatives.

This variation, then, was designed to offer the individual expectations which he had not previously entertained, to challenge and contradict existing expectations which favored segregation, and to make it evident to the subjects who were initially favorable to segregation that they differed from the majority of the students.

Following the presentation of the counter-arguments, subjects were told that the initial questionnaire had been a pre-test, and were asked to fill out an additional, revised questionnaire (Appendix III). This questionnaire contained the items which operationalized the major variables of the experiment, but also contained two additional pages of items which were not used in the experiment, in order that it might appear

that the questionnaire had been considerably revised.

Norm Presentation: Subjects who were assigned to the norm-presentation variation were given the same breakdown of student responses as were the subjects in the counter-argument variation. However, they were asked to fill out the questionnaire at the end of the norm-presentation, without being given the reasons supporting the norm.

After they had filled out the second questionnaire, these subjects were given the reasons supporting the norm, in the same fashion as those in the counter-argument variation, in order that communications between individuals who had been in different variations might be similar in content.

There was some evidence that the experimental influence was not effective for some subjects in this variation. Some of them seemed either not to believe the norm to be correct, or they considered it to have resulted from false statements by fellow students. It was not too uncommon for expressions of wonderment to be made when the norm was announced. This effect seemed less noticeable in the counter-argument variation once the arguments had been made. This condition may have some bearing on the lack of results in the norm-presentation variation. However, the evidence supporting this observation is impressionistic, and lacks any objective support. It is possible that there was no greater disbelief in the norm-presentation variation than in the counter-argument.

Control Group: Control group subjects were asked to fill out the second questionnaire immediately after the class was broken into the three groups. After they had filled out the questionnaire, they were given the same presentation as the norm-presentation and counter-argument subjects.

The experimental procedure was conducted for six of the seven

classes on the same day. The seventh class--the class in the Education Department--was subjected to the experimental influences three days after the other classes. Inspection reveals few, if any, indications that this lapse in time produced any significant differences between the seventh class and the other six.

C. Operational Statement of the Hypotheses:

Now that the concepts have been operationally defined, it might serve to clarify the hypotheses if they were restated in terms of the operational definitions. Since the change influence was directed at subjects who were at the pro-segregation (anti-Negro) end of the continuum, the hypotheses are strictly applicable only for these individuals.

Hypothesis 1: Subjects whose reasons for supporting the position they chose were coded into only a few categories should change more readily than subjects whose reasons were coded into relatively many categories.

Hypothesis 2: Individuals who indicated that they felt strongly about the issue, and who said that the issue was important to them should change less than those who felt less strongly and for whom the issue was less important.

Hypothesis 3: Change should be greater in the two experimental groups than in the control group, and change should be greater in the counter-argument group than in the norm-presentation group.

Hypothesis 4: Subjects who view the student body as being attractive should change more than subjects for whom the student body is a neutral or a negative reference group; and subjects who already perceive themselves as deviant from the group should change less than those who do not consider themselves deviant.

CHAPTER IV

EXPERIMENTAL RESULTS

This chapter will present the results of the experiment. The findings will be presented in three sections: first, the interrelationships among the measures that were used; second, the differences in amount of change in the three variations; and third, the relationships between the various individual measures and attitude change.

A. Interrelationships among Measures

Table 1 indicates the manner in which the various measures were related on the first administration of the questionnaire. Since the table is quite complicated, it would probably aid its interpretation to discuss each of the variables as it related to the others.

1. Intensity: There were two items which, it was felt, reflected the intensity, or affective, component of the attitude. These were (a) "How strongly do you feel regarding this issue?" and (b) "How much do you care whether or not Negroes can buy property in residential areas occupied by Whites?" As is indicated in the table, the two items correlated quite highly ($p=.001$, $tau=.41$). The two items also correlated in about the same degree with the attitude question. In each case, the relationship was U-shaped. That is, subjects who held extreme attitude positions also tended to have a high degree of affect associated with the attitude. In each case, also, the probability that the relationship between intensity and extremeness of attitude would be as large as this by chance was approximately .05.

Furthermore, the two items correlated with the telic question ("How much work would you be motivated to do to aid in convincing others as to the correctness of your decision?") in about the same degree. For

Table 1. The Interrelationships among measures on the first questionnaire

	Strength of Feeling	Importance of Issue	Cognitive Range	Perc'd. Deviation	Conflict	Telic	Attitude Position
Strength of Feeling		p=.001 tau=.41	no relation	no relation	p=.001 tau=-.33	p=.001 tau=.32	U-shaped p=.05
Importance of Issue	p=.001 tau=.41		no relation	no relation	no relation	p=.001 tau=.33	U-shaped p=.05
Cognitive Range	no relation	no relation		no relation	Anti-Negroes only: p=.01 tau=.33	no relation	no relation
Perc'd. Deviation	no relation	no relation	no relation		no relation	no relation	p=.001 tau=.53
Conflict	p=.001 tau=-.33	no relation	Anti-Negroes only: p=.01 tau=.33	no relation		p=.01 tau=-.26	no relation
Telic	p=.001 tau=.32	p=.001 tau=.33	no relation	no relation	p=.01 tau=-.26		p=.001 tau=.35
Attitude Position	U-shaped p=.05	U-shaped p=.05	no relation	p=.001 tau=.53	no relation	p=.001 tau=.35	

the item concerning strength of feeling, those who said that they felt strongly about the issue also said that they would take more action to implement their position (p=.001, tau=.32). Similarly, the item having to do with importance of the issue correlated positively with the telic item (p=.001, tau=.33).

However, the two measures did not correlate in the same manner with the conflict item. Strength of feeling correlated negatively with the question on conflict (p=.001, tau=-.33), while importance of the

issue did not correlate with conflict.

Neither of the intensity items correlated with other measures.

2. Cognitive Range: Cognitive range was correlated only with conflict, and this correlation was present for anti-Negro subjects only. This may indicate that such subjects entertained certain feelings of guilt or doubt about their position. The fact that cognitive range was unrelated to other variables, and especially that it was unrelated to attitude position and to the intensity items indicates, as was hypothesized in Chapter II, that French's findings are not universally applicable, or that the measure of cognitive differentiation was different from that used by French.

3. Perceived Deviation: Subjects were asked to check the attitude item as they thought the majority of their fellow students would check it. It was then possible to compare the individual's own position with the position which he felt the majority of the other students would take. The difference between his position and the position at which he perceived the group was considered to be the extent to which he perceived himself as deviant, or his "perceived deviation." Thus, a person with a high perceived deviation score was one who perceived himself as highly deviant from the majority of the group.

Perceived deviation was related to only one other variable, that of attitude position. Subjects who were pro-Negro had a high perceived deviation score (felt themselves to be deviant from the group), while the majority of those who were anti-Negro had a low perceived deviation score (did not feel themselves to be deviant). This relationship was highly significant ($p=.001$, $tau=.53$). This result contradicts the commonly-held theory that individuals tend to perceive the group as holding a position similar to their own.

If the subjects who were included in the experiment may be taken as representative of the student body at the college, this perception is not strictly accurate. The distribution of attitude positions was bi-modal. About 4% of the subjects were in the neutral positions; about 13% in the most extreme anti-Negro position; about 12% in the most extreme pro-Negro position; and 33% and 37% respectively in the intermediate anti- and pro-Negro positions.

However, it is unlikely that the sample is representative af the college as a whole; the student body in general is probably on the anti-Negro side. Nevertheless, there is evidence that the students in the class were aware of this fact, and many of the pro-Negro subjects were conscious of their deviation from the group.

4. Conflict: In addition to being related to strength of feeling and to perceived deviation, the conflict item was positively related to the action (telic) item. That is, subjects who said that they would have considerable trouble deciding how to vote tended to say that they would not take action to implement their position ($p=.01$, $tau=-.26$). The conflict item was unrelated to other items.

5. Telic: The question on how much action subjects would take to implement their position was related, as mentioned, to the intensity questions and to the amount of conflict subjects felt about their position. In addition, the item was related to attitude position. Subjects who were pro-Negro tended to say that they would take more action than subjects who were anti-Negro.

Discussion: It may be seen that there is little evidence that the items were so highly inter-correlated as to be measuring identical attributes. The principle inter-correlations between items occur between the two intensity measures, and between the intensity and telic

items. Otherwise, the relationships seem to be fairly distinct ones.

It may be pointed out that the intensity items did, in fact, display a U-shaped relation with attitude position. Subjects who were more extreme in attitude position tended to express a greater amount of affect. Nevertheless, there were subjects at the extremes of attitude position who were not highly intense, and subjects in more neutral positions who were highly intense. As was mentioned in Chapter II, these results support similar findings from a number of other investigations.

B. Comparison of Change Between Variations

The hypothesis which predicted the efficiency of the experimental variations held that there should be greater change in the counter-argument variation than in either the norm-presentation variation or in the control group. As has been indicated, the hypotheses are strictly applicable only to subjects who were anti-Negro originally, since influences toward change were attempted only in the pro-Negro direction. However, results will be presented for pro-Negro subjects as well as for anti-Negro subjects.

1. Anti-Negro Subjects:

a. Sign test: The simplest test of significance of change was the sign test, which indicates the probability that an obtained amount of change may be attributed to chance factors if it is assumed that the probability of an individual's changing in either a positive or a negative direction is .50. One problem with the use of the sign test on the anti-Negro subjects, however, was that it was impossible to detect any negative change among individuals at the most extreme negative position. Consequently, it could not be assumed that the probability of positive and negative change was .50. Since, on the other hand, such an assumption might be made if the extreme subjects were not included in the analysis,

it was decided to eliminate subjects at this position and then to attempt the sign test.

Table 2. Sign test of significance of change among anti-Negro subjects in each variation, ommitting subjects at the most extreme position

		Change			
		Positive	None	Negative	Chance Probability
VARIATION	Control group	6	8	4	.25
	Norm-presentation	4	6	3	.25
	Counter-argument	11	5	3	.03

Table 2 shows that in the control group six subjects became more anti-Negro and four became more pro-Negro, while eight did not change. This distribution of positive and negative changes would be expected by chance more often than one time in four. Among norm-presentation subjects, three changed negatively, four changed positively, and six did not change. This proportion of positive and negative changes also might be expected to occur by chance with considerable frequency. Among counter-argument subjects, however, three changed negatively, eleven changed positively, and five did not change. This proportion of positive and negative changes would be expected by chance alone only about 3% of the time.* If we accept the 5% level of confidence as our criterion of significance, then we may say that the amount of change in

*Since the hypotheses stated the expected directionality of the differences, it was possible to use a one-tailed test of significance rather than the more commonly used two-tailed test. See Smith (51) and Marks (34) for statements of the logic of this.

in the counter-argument variation exceeds chance in the expected direction.

b. Comparison between variations: The sign test indicates the probability that an obtained amount of change would take place if the probability of change in either direction is arbitrarily set as .50. A more rigorous test of the significance of change in this experiment is one which compares the amount of change in one variation with that in another.

For this purpose, the usual contingency tables were constructed and the Chi-Square test of significance was used. Since the total number of subjects in each variation was relatively small, the expected cell frequencies were often less than five. For this reason, the Mood Maximum Likelihood Test of significance was used to provide a more reliable estimate of Chi-Square (35).

Table 3. Comparison of experimental variations with respect to amount of change

		Variation			
		Control group	Norm-presentation	Counter-argument	Total
CHANGE	Positive	8	7	12	27
	None or negative	17	13	12	42
	Total	25	20	24	69

Chi-Square= 2.12 p=.20

Table 3 indicates that when all anti-Negro subjects are included in the contingency table, the difference in amount of change between the three variations is not greater than we would expect by chance.

The greatest difference was expected to appear between subjects in the counter-argument variation and those who served as a control

group. However, the difference in amount of change between the two variations is significant at only the 10% level of confidence (Table 4).

Table 4. Comparison of change among control-group and counter-argument subjects

		Variation		
		Control group	Counter-argument	Total
CHANGE	Positive	8	12	20
	None or negative	17	12	29
	Total	25	24	49

Chi-Square=1.79 p=.10

However, the lack of significance might easily be a function of the small size of the sample. For this reason, it was decided to make an additional comparison of the three variations, this time in terms of the number of subjects who shifted from an anti-Negro position to a pro-Negro position. When the variations are compared on this basis, it is evident that the counter-argument variation differs significantly from the other two in the number of subjects who changed. This difference is significant beyond the 2% level of confidence (Table 5).

Table 5. Comparison by variation of subjects who changed from an anti-Negro to a pro-Negro attitude position

		Variation			
		Control group	Norm-presentation	Counter-argument	Total
CHANGE	Changed	3	1	8	12
	Did not change	22	19	16	57
	Total	25	20	24	69

Chi-Square=6.908, p=.02

Perhaps a word of elaboration is necessary regarding this

table. Whereas previous tables have given comparisons between the variations in terms of whether or not any change took place, this table shows the number of subjects in each variation who actually changed from anti-Negro to pro-Negro. It indicates a considerably higher proportion of this type of change among counter-argument subjects than in either of the other variations. It is the presence of the counter-argument variation in the table which makes the Chi-Square significant. When the counter-argument variation is compared with the control group, the resulting Chi-Square is 3.29, and the probability of this happening by chance alone is .03.

As further corroboration of this result a comparison was made between counter-argument and control-group subjects as to the magnitude of change. In each group, subjects whose attitude position changed two or more steps in the pro-Negro direction were compared with those who changed less than two steps. Table 6 indicates that there was a greater amount of such change among counter-argument subjects than among those in the control group. The difference is significant at the 2% level of confidence.

Table 6. Comparison of magnitude of change among control-group and counter-argument subjects

		Variation		
		Control group	Counter-argument	Total
CHANGE	2 steps or more	3	9	12
	less than 2 steps	22	15	37
	Total	25	24	49

Chi-Square= 4.454 p=.02

Thus, it may be accepted with some confidence that subjects who were subjected to the counter-argument influence changed more than

did those in either the control group or the norm-presentation variations. However, contrary to the hypothesis, subjects in the norm-presentation variation did not differ from control group subjects.

2. Pro-Negro Subjects: Among subjects who were originally pro-Negro, a somewhat different tendency is present (Table 7). There was very little attitude change in the counter-argument variation, which was anticipated since the original position of these subjects was reinforced by the experimental manipulations. In the control group a somewhat greater amount of change is evident. However, the greatest amount of change took place among norm-presentation subjects, where there was a marked tendency for displacement of attitudes to take place in an anti-Negro direction. This shift was large enough that the probability of a difference in change as great as that found between norm-presentation and counter-argument subjects is less than .01.

Table 7. Comparison by variation of subjects who were originally pro-Negro and who became more anti-Negro

		Variation			
		Control group	Norm-presentation	Counter-argument	Total
CHANGE	Positive or none	14	14	18	46
	Negative	8	11	3	22
	Total	22	25	21	68

Chi-Square= 5.249 p=.05
Chi-Square between Norm-presentation and Counter-argument= 5.017 p=.01

Much of the change in the norm-presentation group comes from subjects at the most extreme pro-Negro position. Thus, when subjects at the most extreme position are omitted, the sign test for the norm-presentation subjects is not significantly different from chance.

In addition, the magnitude of the change is not great. When the variations are compared in terms of the number of pro-Negro subjects who became anti-Negro, there is no significant difference present.

Table 8. Comparison by variation of subjects who changed from pro-Negro attitude positions to anti-Negro positions

	Variation			
	Control group	Norm presentation	Counter-argument	Total
Changed from pro- to anti-Negro	2	3	1	6
Did not change from pro- to anti-Negro	20	22	20	62
Total	22	25	21	68

Chi-Square= .790 p=.70

C. Individual Factors Related to Attitude Change

The hypothesized relations between individual characteristics and attitude change centered around the relationship of affect and cognitive range to change in attitude, and the effect on attitude change of positive attraction to the group. It was hypothesized that there would be a negative relationship between both affect and cognitive range and change, and a positive relationship between attraction to the group and attitude change.

1. Relationship between affect and attitude change:

a. Anti-Negro Subjects: Contrary to the hypothetical predictions, amount of affect was not related to attitude change in all of the variations. Instead, the relationship was found only in the counter-argument variation. For subjects who were presented with the counter-argument influence, the relationship between affect and change was high. As is indicated in Table 9, subjects who said that they felt very strongly about the issue tended either not to change or to change negatively, while

subjects who said that they did not feel so strongly about the issue tended to change in a positive direction.

Table 9. Relationship of Strength of Feeling to Change among Counter-argument Subjects

Strength		Change			
		Negative	None	Positive	Total
	High	2	6	0	8
	Not so high	0	3	10	13
	Total	2	9	10	21

Chi-Square=16.459 p=.001

Similarly, counter-argument subjects who said that the issue was important to them tended either not to change or to change negatively (Table 10).

Table 10. Relationship of importance of issue and change, among counter-argument subjects

Importance		Change			
		Negative	None	Positive	Total
	High	2	8	5	15
	Not so high	1	1	7	9
	Total	3	9	12	24

Chi-Square= 7.856 p=.01

Through the use of a three-variable contingency table, it was possible to compare one intensity measure to change in attitude with the other intensity measure held constant.* In this method, a Chi-Square value was computed between one of the measures of intensity and change at each level of the other intensity measure. Thus, a Chi-Square value

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*The problem of making such a comparison was raised by Milton J. Rosenberg, and was worked out by him in connection with Keith Smith, who supplied the statistical reasoning. I am greatly indebted to the two for the use of this technique.

for the relation between strength of feeling and change may be computed for subjects who rank high on importance of issue, and another for subjects who rank low on importance of issue. These Chi-Square values may be added to produce a Chi-Square between strength of feeling and change with importance of issue constant. The final Chi-Square value will have as many degrees of freedom as the sum of the degrees of freedom of its component Chi-Square values.

Since the two intensity measures related so highly to change in the counter-argument variation, it was decided to make such a comparison. Tables 11 and 12 show that when one of the two items is held constant in this way the other does not relate significantly to change in attitude.

Table 11. Relationship, among counter-argument subjects, of importance of issue and attitude change with strength of feeling constant

		Strength of Feeling				
		High		Low		
		Change		Change		
		Positive	None or negative	Positive	None or negative	Total
Importance	High	1	7	1	1	10
	Not so high	2	2	6	1	11
	Total	3	9	7	2	21

Chi-Square (importance and change, high strength) = 1.924
+ Chi-Square (importance and change, low strength) = 1.021
= Chi-Square (importance and change, strength const.) = 2.945
degrees of freedom = 2 p = .14

Consequently, we may say that for predicting attitude change, at least in the counter-argument variation, one of these variables is as efficient as the other.

The relationship between affect and change was not found in the

Table 12. Relationship, among counter-argument subjects, of strength of feeling and change, with importance of issue constant

		Importance of Issue				
		High		Low		
		Change		Change		
		Positive	None or negative	Positive	None or negative	Total
Strength	High	1	7	2	2	12
	Not so high	1	1	6	1	9
	Total	2	8	8	3	21

Chi-Square (strength and change, high importance)=1.207
+ Chi-Square (strength and change, low importance)= 1.604
= Chi-Square (strength and change, importance const.)=2.811
degrees of freedom= 2 p=.14

other variations. However, the tendency in these variations was present sufficiently that the relationship between the intensity variables and change when all anti-Negro subjects were combined was significant (p=.04).

b. Pro-Negro subjects: In general, intensity was not related to change among the pro-Negro subjects. In only one comparison is the relationship between either of the intensity measures and change beyond the 5% level of confidence. In this instance, norm-presentation subjects who s d that the issue was relatively unimportant to them tended to change, when the direction of the change is not considered (p=.04). However, this relationship did not hold for strength of feeling and change within the same group, or for importance and change in either of the other two variations.

2. Relationship between cognitive range and change:

a. anti-Negro subjects: As was true for the intensity hypothesis, the hypothesis regarding the relationship between cognitive range and change was not completely substantiated. Instead, there appeared to

be some interaction effect of situation and variable such that the variable predicted change in some variations but not in others. Specifically, there was a considerable relationship in the predicted direction between cognitive range and attitude change for subjects who were in the control group. Table 13 shows that subjects who changed in attitude tended to be those who had a low cognitive range.

Table 13. Relationship of cognitive range and attitude change among control group subjects who were originally anti-Negro

	Cognitive Range		Total
	High	Low	
Change	5	9	14
No Change	9	2	11
Total	14	11	25

Chi-Square=5.612 p=.01

This relationship did not hold in the other variations, although the relationship approached the .05 level of confidence in the counter-argument variation (p=.08). The trend in the norm-presentation and counter-argument variations was sufficiently strong that the relationship held up when all anti-Negro subjects were combined, regardless of variation (p=.01). It should be pointed out that the relationship is between cognitive range and change, regardless of the direction of the change. That is, the attitudes of subjects with a broad cognitive range were more stable, and less subject to change; while those with a low cognitive range tended to change, regardless of the direction of the change.

b. Pro-Negro subjects: Among pro-Negro subjects, particularly in the control group, the opposite relationship obtained. In this case, the tendency was for subjects with a broad cognitive range to change negatively. Table 14 indicates this relationship for control-group sub-

jects.

Table 14. Relationship of cognitive range and attitude change among control group subjects who were originally pro-Negro

		Change			Total
		Negative	None	Positive	
Cognitive range	high	8	4	2	14
	low	0	4	3	7
	Total	8	8	5	21

Chi-Square=9.25, p=.01

It is apparent that the Chi-Square value for this table attains significance because there was no negative change among subjects with a low cognitive range. When the table is compressed so that the measure of cognitive range is related to attitude change regardless of the direction of the change, the resulting Chi-Square value is not significant. There is no relationship between cognitive range and attitude change among pro-Negro subjects in the norm-presentation and counter-argument variations.

3. Relationship of Attractiveness of the group to attitude change: Two hypotheses were advanced regarding the effect of reference group factors on attitude change. These were: (1) individuals for whom the group is a positive reference group should change more than individuals for whom the group is a neutral or a negative referent; and (2) upon finding that they deviate from the group norm, individuals who previously perceived themselves as conforming to the group norm should change more than those who originally perceived themselves as being deviant from the norm.

Analysis of the data, however, indicates that neither of these hypotheses was confirmed. There is no relationship in these data between

positive or negative reference group and change, or between perceived deviation from the norm and change.

4. Relationship of the telic and conflict items to attitude change: Although no specific hypotheses were derived from the theory with respect to the telic and conflict variables, their relationship with respect to attitude change may be indicated in abbreviated fashion. Briefly, both items were unrelated to change except for subjects in the norm-presentation variation. Norm-presentation subjects who were initially anti-Negro and who changed, tended to be subjects who reported that they would have a considerable amount of trouble making up their minds as to how to vote. It should be pointed out that the relationship is with change, either positive or negative, and not with change in a particular direction.

The telic measure was related to change among norm-presentation subjects who were initially pro-Negro. In this case, there was a negative relationship between the amount of action subjects said they would take to implement their point of view, and the amount of change in attitude.

CHAPTER V

INTERPRETATION

In the previous chapter it was pointed out that the experimental results were inconclusive with respect to a number of hypotheses. This chapter will explore the results in more detail, pointing out possible theoretical revisions, and indicating possibilities for future research. The variables will be discussed in turn.

1. Cognitive Range: Among anti-Negro subjects cognitive range was significantly related to change only in the control group. However, there was a consistent tendency (not statistically significant) for breadth of cognitive range to be negatively related to attitude change among anti-Negro subjects in the other variations. This predicted relationship was significantly present when all subjects who were anti-Negro originally were combined. On the other hand, among subjects who were originally pro-Negro, there was a tendency for cognitive range to be positively associated with attitude change.

If we restrict our attention to subjects who were originally anti-Negro, it may be maintained that the hypothesis is confirmed. The lack of a significant relationship in the counter-argument variation may result from the operation of other factors. It is possible that a factor serving to reduce the relationship in this variation was the emergence of defensive behavior among some of the anti-Negro subjects. In this group only, those subjects whose attitudes were held with a good deal of affect tended to be those who resisted the change influence, regardless of the amount of cognitive range. This finding is consistent with the interpretation of defensiveness.

The problem of accounting for the lack of the predicted relationship among pro-Negro subjects who were in the control group remains.

There were no a-priori grounds on which it was predicted that cognitive range would be differently related to change for individuals at different extremes of the continuum.

At least three assumptions are involved in the theory that a broad cognitive range should be negatively associated with attitude change. These are: (1) among some individuals, concern with a particular attitude object motivates the individual to become informed about the object and thus leads to a broad cognitive range which, at the same time, is strongly anchored at one attitude position; (2) for subjects with a broad cognitive range, the reduction in probability of some of the expectations leaves others which may still result in the same orientation; (3) for certain individuals, a broad cognitive range indicates that opposing expectations have already been entertained and fitted into the complex of expectations.

Another type of theorizing might hold that many subjects with a broad cognitive range are capable of seeing merit in a number of different viewpoints. If such is the case, and if the individual has not arrived at a decision on the issue, he may change his orientation fairly readily. This interpretation is not antithetical to the previous one, but may offer a qualification to that theory. It is certainly possible that the subjects with broad cognitive range who changed negatively may have been subjects of this type.

Any adequate test of the merits of these two interpretations obviously requires further experimentation. And any future experiment that is designed to clear up this point should undoubtedly make an attempt to modify the attitudes of pro-Negro subjects in an anti-Negro direction, if the area of segregation is used.

Further experimentation might also make use of more refined

methods of measuring cognitive variables. The measure of cognitive range used in this study, for example, was somewhat gross. It would be possible, by the use of other measurement techniques, to obtain information about the relationships between expectations: the relative importance of expectations for the individual, and their specific relatedness to the attitude object. With the use of such techniques it would be possible to make a direct test of some of the other hypotheses that dealt with the relationship between cognitive factors and attitude change.

For example, suppose we wish to test the hypothesis that attitude change may be effected by contradicting certain crucial expectations that the individual relates to the object. If we are able to distinguish the expectations which the individuals feel are most important in assessing the object, we are then in a position to predict the effect of a specified change procedure for each individual.

Again, it is likely that a graphic representation may be made of the organization of an individual's expectations toward a particular object. This representation could be constructed from the type of analysis Coombs suggests for data collected by the method of triads (16). It would be possible with such a graphic representation to predict stability of the attitude from the degree of inter-relatedness of the expectations. It would be possible, also, to attempt to manipulate the various expectations in such a fashion as to change the relative importance of certain expectations. Finally, it would be possible to test empirically whether those subjects who changed in attitude position also showed modifications in the organization of their expectations about the object of the attitude.

2. Affect: As was indicated in the preceding chapter, the

relationship between affect and change was found only in the counter-argument variation, and only among anti-Negro subjects. When all anti-Negro subjects were combined, however, the relationship remained as predicted.

The fact that the relationship was most prominent in the counter-argument variation is explicable in terms of the differences between variations. It is likely that subjects whose attitudes filled ego-defensive functions tended to over-react to the counter-arguments. That is, the affect associated with the attitude may have been intensified by the counter-arguments, owing to the defensive function which the attitude filled for the individual. Under conditions where experimental influences, arouse affect, the hypothesis would be expected to hold most completely.

An experiment which would further test the general adequacy of the theory would involve an attempt to manipulate affect as such. For example, to the extent that catharsis regarding an attitude object may reduce the affect associated with the attitude, it should be possible to produce more change in individuals who had been allowed to express resistances than among those who were not offered such a cathartic experience (27).

The hypothesis that catharsis, or other affect reduction, would make for greater susceptibility to attitude change is not unique to this theory. However, the emphasis in this theoretical system on the cognitive factors points to a number of complexities in such an experiment. Thus, although Rogers and his associates (43) place great importance on allowing the subject freely to express his emotions in the therapeutic situation, they also point to the cognitive reorganization following such experiences. It is likely that the strategic spacing of clucks of sympathy or of restatements of the patient's thoughts leads him to re-assess

certain expectations, and produces a cognitive reorganization along particular lines, to the exclusion of others.

At any rate, it may be maintained that the hypothesized relationship between affect and change has been verified for subjects who were subjected to the strongest change influences. That there is no over-all relationship between affect and change among pro-Negro subjects offers no challenge to the theory, since the influences reinforced their point of view. Presumably there was little defense-arousal among these subjects. It is interesting, however, to note that the only relationship between affect and change among pro-Negro subjects confirms the hypothesis. This relationship exists among norm-presentation subjects, where importance of the issue is negatively associated with attitude change.

3. Reference Group Variables: Neither of the hypotheses regarding the effect of reference group variables on attitude change was confirmed. These hypotheses held that subjects who were positively attracted to the group would change more readily than those who were not positively attracted; and that subjects who originally perceived themselves as deviant would change less than those who originally perceived themselves as holding an attitude which conformed to group norms.

A number of post hoc explanations may be developed to account for these results. One such explanation is that group norms in general exert very little influence on an individual's attitudes. This explanation is tenable in the light of the present findings. However, it is difficult to square the explanation with investigations which have demonstrated change in attitude after experiences with conflicting group norms (24, 39).

Another explanation which may have considerable bearing on the case at hand is that the college student body was simply not the most

relevant reference group regarding attitudes toward segregation. It is not unlikely that such attitudes are frequently anchored in the individual's family or other groupings of a more intimate nature than the college student body. Furthermore, there is evidence that the students at Ypsilanti Normal were not a very cohesive group, and that agreement regarding the issue of segregation is not of critical importance for acceptance into the student body.

A further hypothesis which may bear investigation is that the question of Negro segregation is one to which a large proportion of subjects have given some thought, and about which they have arrived at a decision. It may be suggested that individuals are able to tolerate a discrepancy between their own attitude and that of a group provided that (a) they have arrived at a fairly definite conclusion on the issue, and (b) they are not subject to continuing pressures toward conformity from group members.

An investigation which corroborates the hypothesis of the importance of a decision on the issue is one carried out by Burdick (12). Burdick asked groups of sorority women to rate a number of social groups, ranging from fraternities on the same campus to the Interstate Commerce Commission. Within each sorority, questionnaires were randomly distributed so that some subjects had no guide to the ratings other students made of the groups, while other subjects were given information which purported to represent the ratings made by the student body in general, sororities in general, or their own sorority. Briefly, Burdick found most conformity to the norm of the subjects' own sorority. However, he found little conformity regarding evaluation of fraternities, and relatively much conformity in evaluating the Interstate Commerce Commission. Such a result may be interpreted as deference to a group of "people like me" when judging

an object which is ambiguous or little-known (the Interstate Commerce Commission) and adherence to an established point of view regarding a well-known object, such as fraternities. The conclusions reached here are related to those which will be discussed in the next section of this chapter.

Finally, the measure of attractiveness of the group was a gross one, and may simply not have distinguished between subjects sufficiently to disclose the relationship.

In summary, the findings with respect to the reference group variables used in this study are inconclusive. The fact that attraction to the group or perceived deviation from the group did not predict change in attitude does not mean that the variables were unimportant for attitude change. Instead, the measures may have been too crude, or it may be that other factors were operating which counteracted the importance of the reference group factors. Among such factors have been mentioned the degree to which the individuals had arrived at a conclusion about the object of the attitude, and the extent to which they felt that they knew the position of individuals or groups whose opinions were most relevant to the issue.

4. Comparison of Norm-presentation and counter-argument variations: It is important in this section to give a rationale for the lack of difference in change between norm-presentation subjects and control group subjects, while accounting for the fact that the counter-argument subjects did change more than control group subjects. The greater efficiency of the counter-argument variation was predicted by the theory.

It should be pointed out, however, that this experiment in no way tested the relative efficacy of norm-presentation alone asaagainst counter-arguments alone. Subjects in the counter-argument variation were

presented with the norms of the group, and the counter-arguments were phrased as emanating from the group. At its present stage, the theory would not make possible a prediction of the relative efficiency of norm-presentation without argument as against arguments without norm-presentation. It has been suggested that one determinant of the relative effectiveness of the two types of influence is the degree to which the individual being influenced has come to a decision regarding the object.

The prediction of greater efficiency in the counter-argument variation is by no means exclusive to this theory. For example, Duncker has made the following statement:

> "When, due to social suggestion, a subject comes to like a previously indifferent or even disliked object, he really does not come to like the object so much as the feeling of being in harmony with the others, of sharing their attitude. When a real liking for the object is established, then there is either a change in the meaning of the object, or its function in the new context, or discovery of favorable elements within it takes place" (17). (Italics mine.)

Expressed in terms of the theory used here, this means that if attitude change of any permanence is to take place, then expectations about the object of the attitude must be modified, the object must be seen in new contexts, or new, favorable expectations must be introduced into the cognitive-affective complex.

An analogy may be drawn between these experimental influences and the studies on conformity carried out by Sherif, Asch, Berenda, and others. It will be recalled that Sherif found a convergence to a norm when subjects were estimating the distance which lights appeared to move in the autokinetic situation (46). This situation, as Sherif points out, is ambiguous in the extreme. That is, there are no fixed objects in the room which will provide a background in terms of which to judge the position of the lights.

Asch (4) and Berenda (6) also have conducted experiments which investigate the convergence of estimates upon a norm. To quote Berenda,

> "There are different degrees and kinds of ambiguity. There are situations which....are ambiguous because of a certain indefiniteness and lack of clear limits. There are other situations which, psychologically, the person perceives as being unclear within a narrow range....and beyond this range one knows that the judgment of this situation has passed from the ambiguous to the definitely wrong evaluation. The boundaries, somehow, do remain clear. And it is in the latter that group influence will decrease and even become ineffective. This holds true even when the majority is a group that one knows and of which one is a member." (p.78)

Berenda's experiments were patterned after those of Asch. Specifically, subjects were asked to estimate which of two lines was longer. The majority of a group, in collusion with the experimenter, estimated the shorter line as being objectively longer, and the subject was faced with the problem of conforming with the group while denying the correctness of his sensations, or giving an accurate report of his own estimate and deviating from the group.

While there may appear to be a considerable difference between estimating the relative size of lines and responding to an item on an attitude questionnaire, it may be suggested that there are certain similarities concerning conformity to group opinion. One promising area for future research might well be that of attempting to isolate determinants and consequences of ambiguity regarding attitude objects.

In Chapter II of this thesis we have made the assumption that shift of attitude position toward a norm requires, for the great majority of individuals, a cognitive re-organization. If the object in question is one which the individual relates to only a few expectations, the re-organization required may be minimal and the change may be relatively rapid.

If, on the other hand, the individual's attitude toward the object

consists of an expectation-affect complex of a fairly high degree of elaboration, the displacement of attitude toward the norm will probably not take place so easily. Instead, this theory would hold that a process of modification of existing expectations and/or addition of new expectations is required before the change is effected.

In the concrete social situation it is likely that awareness of deviation from a norm and awareness of alternative expectations are correlative influences on the individual. Through communication with other group members he becomes aware of his deviation at the same time as he becomes acquainted with the alternative expectations. It is probable that continued communication with group members often leads to a gradual modification of the cognitive-affective orientation toward an eventual similarity of the individual's attitude with the norm of the group. In the experimental situation, on the other hand, the perception of a norm markedly different from the individual's own attitude is probably not a sufficient influence to produce a great amount of attitude change unless the individual has some familiarity with the rationale supporting the norm, or unless he has little information about the object of the attitude. It is not unlikely that the counter-arguments served the same function as is filled by group interaction over a period of time. The possible effect of the rationale without the norm is a matter for future research.

Conclusions:

In essence, the theoretical statement in Chapter II is an attempt to present a systematic treatment of certain components that are considered to be crucial for an analysis of attitudes as individual phenomena. The components are discussed in general terms, and the generality is intentional. As we have said previously, the range of information about the elements of the components is not sufficient to justify a high degree

of specificity in our theorizing. Under such conditions it seems advisable to work from the general statement, and to introduce specificity as experimental results indicate. Let us consider, then, the kinds of qualifications of the theory that seem to be indicated by the results of this experiment.

1. Situational determinants of the relative importance of the components: In the theoretical statement, no assumptions were made as to the relative importance of cognitive and affective factors for attitude stability. The results of this experiment suggest the hypothesis that the factors vary in importance as situational conditions vary. Supporting this hypothesis is the fact that cognitive factors were most adequate for predicting attitude stability under control group conditions. On the other hand, under conditions of high experimental influence, affective measures were the best predictors of change.

It may be hypothesized that under the latter conditions the individual's defensiveness, or lack of defensiveness with respect to the attitude becomes of critical importance. It may also be hypothesized that reduction in the amount of affect associated with an individual's attitude will increase the relative importance of the cognitive component for the stability of that person's attitude.

Another set of situational factors which require investigation concerns the conditions under which reference group norms are effective for attitude change.

2. Further specification of elements of the components:

a. Cognitive: The contradictory results obtained among pro-Negro subjects in the control group variation with respect to the relation between cognitive range and attitude change necessitate further investigation. It was suggested that these results may have been generated

by lack of closure on the issue, and awareness of a number of different points of view. A test of this hypothesis will require some operational method of estimating closure on the attitude issue.

In addition, the series of hypothesis which set the conditions for the counter-arguments may also be subjected to empirical test.

b. Affective: The conceptualization of affect has been general in the extreme. Pre-test interviews have indicated that the items used to measure affect are variously interpreted by subjects. One problem, then, involves arriving at some operational measure which possesses a more uniform meaning for subjects.

Beyond this, the conditions under which affect becomes associated with the attitude may well merit investigation. That is, a negative affective component deriving chiefly from displaced hostility, say, may lead to considerably different consequences than one that derives from unpleasant personal experiences.

Still to be investigated are the possible interrelationships between affect and expectations. It is likely that under some conditions affective factors prevent cognitive reorganizations, or at least make such reorganizations more difficult. Conversely, the possible effects of cognitive factors on affect merit investigation. A case in point would be an examination of the dynamics behind the arousal of affect by cognitive presentations such as those used in the counter-argument variation.

Such theoretical modifications rest upon future experimentation. To sum up the results of the present experiment, there is evidence that making individuals aware of their deviation from the norm of a group to which they belong, and providing reasons which bolster that group norm is effective in producing attitude change. For predicting which individuals will change, no single hypothesis held under all experimental conditions.

Instead, cognitive factors were the best predictors of attitude change when influences toward change were minimal, and affective factors were best under conditions of maximal influence.

APPENDIX I

INITIAL QUESTIONNAIRE

(Introduction by Experimenter: "We in the Sociology Department at the University of Michigan have been interested in developing somewhat different techniques for getting at attitudes. What we would like to do is administer some questionnaires, look at the results, and then design additional questionnaires based on what we have learned from these. Your instructor, Mr. _____, has agreed to allow us to administer the initial questionnaire in this class on the condition that we report the findings back at a later date. Consequently, you may expect to see us again in about a month, when we will have these questionnaires analyzed.")

March 31, 1952

We want to keep this questionnaire anonymous and to avoid identifying any students by name. However, for various reasons we would like to have some way of identifying the questionnaires eventually. For this purpose we have worked out the following code: In the left hand blank below, place the first letter in your father's first name; in the center blank write the year of your birth; and in the right hand blank write the first letter in your mother's first name.

Example: Father's name: Arthur Johnson
Mother's name: Barbara Johnson
Year of birth: 1932

Code: A 1932 B

_____	_____	_____
Father's first initial	Year of birth	Mother's first initial

The Questionnaire will be divided into 2 sections: one dealing with creative imagination, the other with a study of attitudes.

(The first four pages of the questionnaire dealt with student responses to need Affiliation pictures. Since the conditions of the questionnaire were not such as to produce reliable results on the Need Affiliation test, these pages will not be reproduced here.)

Describe the student body at Ypsilanti Normal College. What kind of a group is it? Compare the students here with students in other colleges you may know about. You will have four minutes.

ATTITUDE SECTION

This is a study of attitudes. However, we are interested not so much in knowing what the average attitude positions are among a group of people as we are in trying to find out certain of the reasons why the attitudes are held.

For this reason, it is important that you answer each question freely and frankly. Although we are administering the questionnaires through various classes, the questionnaire will have no bearing whatsoever on your grade or your position in the class. It is simply easier to collect the material in this way than in other ways. Your instructor will not be told any of the results of the study until the current semester is over. Students will not be identified to him in any way, and we will pledge our assurance that no person's responses to any of the questions will be discussed as they relate to him individually.

Since we are trying out different methods of getting at attitudes, this questionnaire may be somewhat different from others you may have taken. Consequently, please read the following instructions carefully. For items in which you are to make a choice as to which answer most nearly represents your opinion:

Place the number 1 before the statement which most agrees with your position.
Place the number 2 before the statement which reflects your opinion next best.
Place the number 3 before the statement which next best reflects your opinion.
Place the number 4 before the statement which reflects your opinion fourth best.
Place the number 5 before the statement which least adequately reflects your opinion.

Example:

Suppose a millionaire offered to give you $100,000 for doing a particular task. How would you react? (This might be answered as follows)

2 I can think of no conditions when I would refuse the money.
1 Most of the time I would take the money, but sometimes I might not.
3 It would be about a 50-50 choice as to whether I would take the money.
4 Most of the time I would reject the money, but sometimes I would take it.
5 I can think of no conditions when I would accept the money.

In the blanks to the left of the statements, please rank the statements 1, 2, 3, 4, 5, according to how closely they come to representing your opinion.

1. Suppose you lived in a residential area from which Negroes were excluded by agreement of landowners. One of the landowners wishes to sell his house to a Negro. After considerable discussion it is decided that the final decision as to whether to allow the Negro to buy the house will be made by a vote of the residents in the area. How would you vote?

_____ I can think of no conditions when I would vote to allow the Negro to buy the house.
_____ Under most conditions I would vote against allowing him to buy the house, but under some conditions I might vote to let him buy.
_____ I think it would be a toss-up as to whether I would vote to let him buy or not; it would be about a 50-50 choice.
_____ Under most conditions I would vote to allow him to buy the house, although under some conditions I might vote against letting him buy.
_____ I can think of no conditions when I would vote against letting him buy the house.

2. In the blanks to the right of the statements: Place the number 1 beside the statement that you think most of the students at Ypsilanti Normal would be most likely to pick as their position on the issue. Place the number 2 beside the statement that you think most Ypsilanti Normal students would be next most likely to pick as their position on the issue. You need not rank the remaining statements.

(Please do not turn the page until told to by the leader.)

3. Many factors may have been involved in the decision you have made on the first question. We realize that it might take a long time to write out all of these, but we are asking you to put down as fully as possible all the things that you considered in making this decision. Please elaborate these considerations as fully as possible, and do not simply restate your decision. Try to give the different reasons that entered into your decision. Write on the back of this page if necessary. You will have eight minutes for this.

4. How strongly do you feel about your first choice on question 1? (Rank statements 1, 2, 3, 4)

_____ very strongly
_____ fairly strongly
_____ fairly weak
_____ indifferent

5. How much trouble would you have in deciding how to vote? (Rank 1, 2, 3, 4)

_____a very great deal
_____some, but not a great deal
_____very little
_____none at all

6. How much work would you be motivated to do to aid in convincing others as to the correctness of your first choice on question 1? (Rank 1, 2, 3, 4, 5)

_____I would do no work at all.
_____At most I might discuss the matter with personal friends who disagreed with me, but I would not do any other work.
_____I might type and address letters to residents, but I would not organize committees, make personal or telephone calls, or solicit funds.
_____I would work on projects of talking and writing to residents, but I would not help in the organization of committees, or soliciting funds.
_____I would aid in organizing committees to make personal calls on residents, to make telephone calls, to write and mail letters to residents, and to solicit funds to finance the campaign.

7. How much do you care whether or not Negroes can buy property in residential areas occupied by Whites?

_____a great deal
_____some, but not a great deal
_____very little
_____I don't care at all

APPENDIX II

INFLUENCE PROCEDURES

(Before the experimental manipulations were begun, each subject had been assigned to one of the three experimental variations. Assignments were made by code number, using the first letter of their father's first name as the basis of the assignment. These assignments were made randomly, by placing the code numbers in each class in alphabetical order and assigning subjects with the same first code letter to the same variation. In order to avoid a concentration of subjects with the same code letter in any one variation, the assignment of subjects to variations was begun with a different letter in each class. The only restrictions placed on the distribution of subjects were (1) that each of the three sub-groups in any one class should have approximately the same number of subjects, and (2) that the three variations as a whole should have roughly the same number of subjects at each of the attitude positions.)

Initial statement: As you remember, when we asked you to fill out the questionnaires about a month ago, we agreed to report back the findings when they became available, so we are here to do that today. We have found that these reports work better when they are made in small groups, rather than in large classes. Consequently, three of us have come over to report back the findings, and we will break the class into three groups. Since we were breaking the classes up into three parts, we thought it would be nice to be very scientific and do it in a random fashion. Therefore, we have made the breaks on the basis of your code numbers on the first questionnaire. Will everyone whose father's first name begins with _, _, _, and _ go with Mr. Rosenberg to room 212, please? (After they have left) Those whose father's first name begins with _, _,

_, and _ go with Mr McCargar to room 313; and the remainder will stay in this room with me, please.

Control Group:

When we were granted permission to administer questionnaires in various classes here at Michigan State Normal, we agreed to report back the findings of the research when they became available. Some of the results are available now, so we will take up a considerable part of the hour for this purpose.

But first, the questionnaire that you filled out about a month ago was, in fact, a rather tentative one. We are interested in seeing whether or not the kinds of questions we were asking would give us the kinds of information we needed. In technical terms, that questionnaire was a "pretest questionnaire."

On the basis of the results we got from that one, we are trying out a second questionnaire which includes improvements on the first one, omits some questions, and puts in some additional questions. We would appreciate it very much if you will fill this one out for us at this time. This questionnaire is considerably shorter than the previous one, and will probably take a good deal less time to complete. When you finish with this, we will proceed with a discussion of the results of the first questionnaire.

You may recognize some of the questions on this questionnaire as being similar to questions on the last one. Do not let this bother you, but please just go ahead and mark these questions as you feel at this time. Since this is a new questionnaire, we are interested only in your opinions as they are at present.

(After questionnaire presentation, skip to page 1 of counter-argument variation and proceed from there)

Norm-presentation variation:

When we were granted permission to administer questionnaires in various classes here at Michigan State Normal, we agreed to report back the findings of the research when they became available. Some of the results are available now, so we will take up a considerable part of the hour for this purpose. We will also ask you to fill out a revised form of the questionnaire. But before that, let me tell you a little bit about our preliminary findings.

(Experimenter goes to the blackboard and puts on it the following blank table.)

Always vote to keep Negroes out	Usually vote to keep Negroes out	50-50 choice	Usually vote to let Negroes move in	Always vote to let Negroes move in

(Do not fill in the table until later)

The part of the questionnaire that was easiest to analyze was that having to do with attitude toward allowing Negroes to move into white residential areas. We received responses on the questionnaire from a great many classes here at Michigan State Normal, and feel that the responses represent a pretty good sample of the opinion of the students enrolled here. We were a little surprised to find that almost exactly two-thirds of the students here said they would either always or usually vote to allow the Negro to move into the area. The breakdown of responses was: (Fill these in the table as you read them off.)

(1) 18% of the students said they would always vote to allow the Negro to move into the area;

(2) 48% said they would usually vote to allow the Negro to move into the area;

(3) 13% said it would be a 50-50 choice as to whether or not they would allow the Negro to move into the area;

(4) 11% said they would usually vote against allowing the Negro to move into the area; and

(5) 10% said they would always vote against allowing the Negro to move into the area.

So a majority of you (66%) said that you would either always or usually vote to allow the Negro to move into the area, while a minority (21%) said they would either usually or always vote to keep him from moving into the area.

If we were to think of an average student, his rankings of the question would be (fill this in above the table): First choice: usually let the Negro move into the area; second choice, always let the Negro move into the area; third choice, it would be a 50-50 choice; fourth choice, usually vote against allowing the Negro to move into the area; and fifth choice, always vote against allowing him to move into the area.

Before we go any farther, the questionnaire you filled out about a month ago was, in fact, a rather tentative one. We were interested in seeing whether or not the kinds of questions we were asking would give us the kinds of information we needed. In technical terms.....
(The remainder of this is identical with the control group presentation in which the rationale for taking the second questionnaire is given. After the questionnaire presentation, skip to page 2 of counter-argument variation and proceed from there.)

Counter-argument variation:

(In each of these variations, the report is read directly from a typewritten script, in order that similarity between presentations in each class may be preserved.)

(The initial procedure in the counter-argument variation is

identical with that in the norm-presentation variation. However, instead of giving the questionnaire, the following presentation is made:)

Another part of the questionnaire that has been analysed is the question that asked students to state the reasons behind their decision as to how to vote on allowing Negroes to move into the area. We have organized these reasons under a number of different headings, in order to make this report a little easier to handle. What we will do is read off the list of factors favoring either allowing or not allowing Negroes to move into the area.

It should be emphasized that everyone who replied to the questionnaire was sincere in his point of view, and held it with a good deal of honest conviction. Since there were more people in favor of letting the Negro move into the area, we have more arguments for that side. However, arguments from both sides will be presented in detail. What we are trying to do is simply to present the points of view that you held.

The first category into which we have analyzed the reasons given for taking a position on the issue we have called "Ideological Considerations." Few, if any, of the students who were <u>against</u> allowing the Negro to move in gave reasons which fitted into this category. Most of you who were in favor of allowing the Negro to move into the area gave as reasons belief in democratic or religious philosophies. A common statement was that all men are created equal and are equal in God's eyes. Similarly, there was considerable emphasis upon the belief in the brotherhood of man which--you believed--should include all men, regardless of their racial characteristics. Following from these beliefs were statements that each person should be allowed to make his own decisions regarding major aspects of his life, that everyone should have an opportunity to live up to his

own aspirations and abilities without being restricted because of physical characteristics over which he has no control. There was emphasis on the value of being open-minded; of judging others on the basis of their capabilities rather than their physical characteristics. Tied in with this was a general dislike of the use of force or of community pressure to prevent people from making as much of themselves as they could. There was a feeling that a democratic society means one in which individuals are allowed to change and better their positions on the basis of their abilities, without being restricted by community regulations based on disapproval of physical characteristics.

A second category in terms of which the reasons were analyzed involved the perceptions of Negro characteristics. Among the minority who would vote <u>against</u> allowing the Negro to move into the area, perhaps the commonest reasons given for the decision referred to characteristics which they felt were shared by Negroes in general. Thus, Negroes were seen as being poor, or uneducated, or emotional, or conceited or aggressive. Similarly, they were seen as being untrustworthy, or dirty, or having little pride in themselves.

Many of the majority who were <u>in favor</u> of allowing Negroes to move into the area also mentioned these characteristics as influencing their vote in specific cases. However, then tended to see these characteristics as being present in people of all types, rather than simply in Negroes. Many of them felt that these traits characterize people low in the economic scale. They thought that Negroes who had been able to increase their economic, educational, and social standing would be unlikely to show these traits. A sizeable number of these students mentioned studies that indicate that there is no inherited difference between Negroes and whites in intelligence, neatness, original abilities, and so on, but

these factors vary according to the person's early training and his present social position.

Many of you who would vote in favor of allowing the Negro to move into the area said that you would have certain standards that would be expected of any neighbor. Things which were mentioned included keeping up the property, industriousness, type of occupation, likeableness, morality, general social background, and so on. People with this point of view tended to believe that these traits were as likely to be found among Negroes as among whites, provided the Negro's social and economic background was of the sort which provided experiences in which these traits could be learned. They felt that a Negro who could afford to move into the neighborhood would rank high on these standards and consequently would be acceptable as a neighbor as often as would whites. That is, they felt that if the Negro was capable of handling the move financially, he would be as likely to have these desirable characteristics as would white people, and that he would be as good a neighbor as most whites and perhaps better than some whites.

A third category in terms of which the reasons were analyzed was the results that people felt would come from allowing Negroes to move into white neighborhoods. Several of the minority of students who would vote against allowing the Negro to move into the area felt that the prestige of the neighborhood in general and the property values would decline. People on the other side of the issue, that is those of you who were in favor of allowing the Negro to move in, were inclined to say that you felt the prestige of the neighborhood might decline temporarily, but that it would go back up when it was discovered that the houses were neatly kept and that the relations between Negroes and whites were good ones. Regarding property values, they pointed out that the decline, provided there was

a decline, would also be only temporary. Many of you referred to studies which show that when there is a decline in property values in such areas it comes as a result of white families moving out of the area quickly. But they believed that there would be no necessity for the white families to move out of the area. They thought that the relationship with the Negroes would be a friendly, enjoyable, and educational one. Thus, the result of moves of Negroes into currently white neighborhoods would be to remove concentrated neighborhoods of Negro residence. Instead, there would be a clustering in neighborhoods of people of all racial and nationality groups who shared common values, goals, and economic and social positions in the community. Even if a few whites did move out, there seemed to be a general feeling that there would be no lasting drop in property values, and perhaps an actual increase.

A final reason given by those who were <u>against</u> allowing Negroes to move into the area was that they felt such a mixture of Negro and white families would lead to intermarriage between Negroes and whites. They felt that such an eventuality would be a bad one in general. Not many of those who were <u>in favor</u> of allowing the Negro to move into the area commented on this possibility. Of those who did, the general point of view was that intermarriage is unlikely for some time, since most Negroes realize even more acutely than whites the difficulties of mixed marriages. They felt that if, a century or two from now, the public attitude toward Negroes became less hostile, then intermarriage might be expected and would cause little trouble for the marriage partners or for society in general. But right now very few Negroes or whites favor it, and so it isn't likely to occur.

Many of the students who were <u>in favor</u> of allowing the Negro to move into the area gave as a reason the beneficial aspects of mixed Negro-white neighborhoods. They felt that much of the education of people to

favorable aspects of other groups comes as a result of meeting members of the other groups on an equal basis. Consequently, you thought that the close residence of Negroes and whites would permit them and their children to see one another in a favorable light and would consequently reduce hostility. They felt that if there was so much hostility among the whites that the Negro family might be harmed physically it would be well to vote against allowing the Negro to move into the area for the time being. However, most of you who mentioned this felt that it would be good to try to persuade the whites who were hostile to give the Negro family a chance to show what kind of people they were, and consequently to become better accepted in the neighborhood.

To summarize the reasons given for the various positions, then, (Go to blackboard and put on outline, ad-libbing continuity for it as you go along--which shouldn't be much different from the previous presentation.)

Ideological Considerations	Negro Characteristics	Results of Move
Vote No: Few, if any	Vote No: Unfavorable characteristics: e.g., poor, uneducated, emotional, untrustworthy, etc.	Vote No: 1. Lower property values. 2. Lower neighborhood prestige. 3. Intermarriage
Vote Yes: 1. All men created equal. 2. Brotherhood of man. 3. Everyone making own decisions of Value of open-mindedness. 5. Betterment rests on abilities rather than physical characteristics.	Vote Yes: 1. Above traits characterize people in general. 2. Want any neighbor to have desirable traits: e.g., industriousness, etc. 3. Belief that those who could afford to move would rank high on these characteristics.	Vote Yes: 1. Lowering of prestige temporary only. 2. Intermarriage unlikely. 3. Lowering property values temporary only. 4. Educational aspect of frequent contact with other groups 5. Eventual clustering of people on basis of common goals, values, etc. rather than race or nationality

Before we go any farther, the questionnaire you filled out

about a month ago was, in fact, a rather tentative one. We were interested in seeing..... (The remainder of this is identical with the control group presentation in which the rationale for taking the second questionnaire is given.)

General comments to experimenters:

1. Start the variation about five minutes after the hour.

2. Stifle all questions. It is important to make all of the classes as much alike as possible. If someone has a hand in the air and won't be ignored, make the statement "I'm sorry, but we haven't time for discussion at this time. If you wish, we will be able to come back at a later time and discuss the material in more detail."

3. Give twenty minutes on the nose for the questionnaire. If anyone has not finished in the twenty minutes, cut him off. The second part of the questionnaire is not central to the study anyway, although don't tell them that.

4. General comments on administration of the questionnaire:

a. Read aloud the instructions to the questionnaire, on the face sheet.

b. Read through the statement at the beginning of the first item, "Suppose you lived in a ....." and then have them mark the item.

c. Keep them from beginning on the open-ended question until everyone is ready.

d. Read aloud the introductory statement to the open-ended question: "Many factors may have been involved...." Then call off the passage of time thus: "You have three minutes left." "You have two minutes left." "You have one minute left." "Take about fifteen seconds to finish, please." All right, please turn the page and begin on the next question."

e. After they have completed the open-ended question, let them

finish the questionnaire at their own speed, except for breaking it off when the twenty minutes are up.

5. If you find yourself with more than five minutes of time on your hands when the variation is finished, proceed into a somewhat neutral area of feedback, such as a discussion of the relative merits of different techniques of scaling attitudes. If there is less than five minutes of time left at the end of the hour, give the closing statement, and let the subjects leave ahead of time.

Closing Statement:

There is one thing which is of considerable importance. We have found that it is quite important if we are to get reliable responses to the questionnaire that there be little informal discussion of the material before the questionnaire is taken. Therefore, we would appreciate it very much if you would refrain from discussing the questionnaire with anyone who has not yet taken it. This will mean not talking about it until tomorrow, since we will finish up with this tomorrow morning.

If any of you are interested in going further into a discussion of the findings, Professor Smith has said that he will be happy to arrange for a time when we could come back over (perhaps one or two evenings this week at 4:00) to discuss the implications of the findings and the rationale of the reasons in a little more detail. We will also write up the findings we get from further analysis, and will distribute mimeographed copies of this. But at the present time we would appreciate it if you will keep discussion of the results and of the new questionnaire to a minimum.

APPENDIX III

SECOND QUESTIONNAIRE

(The face sheet of the second questionnaire was identical with that of the first questionnaire, except that subjects were asked to pick only their first and second choices from the alternatives, rather than to rank all of the alternatives.)

1. Suppose you lived in a residential area from which Negroes were excluded by agreement of landowners. One of the landowners wishes to sell his house to a Negro. After considerable discussion it is decided that the final decision as to whether to allow the Negro to buy the house will be made by a vote of the residents in the area. How would you vote?

_____ I can think of no conditions when I would vote to allow the Negro to buy the house.
_____ Under most conditions I would vote against allowing him to buy the house, but under some conditions I might vote to let him buy.
_____ I think it would be a toss-up as to whether I would vote to let him buy or not; it would be about a 50-50 choice.
_____ Under most conditions I would vote to allow him to buy the house, although under some conditions I might vote against letting him buy.
_____ I can think of no conditions when I would vote against letting him buy the house.

2. Many factors may have been involved in the decision you have made on the first question. We realize that it might take a long time to write out all of these, but we are asking you to put down as fully as possible all the things that you considered in making this decision. Please elaborate these considerations as fully as possible, and do not simply restate your decision. Try to give the different reasons that entered into your decision. Write on the back of this page if necessary. You will have four minutes for this.

(Questions 3 through 6 were identical with the questions on the first questionnaire which dealt with the two intensity measures, the conflict measure, and the telic measure. The only change in instructions was that subjects were asked only to pick their first and second choices, rather than to rank all of the alternatives.)

7. Do you think a student's year in college has anything to do with the way in which he checks the questionnaire? That is, do you think that there would be a difference between Freshmen, Sophomores, Juniors, and Seniors in their decisions as to how they would vote on allowing a Negro to move into a white residential area?

_____ yes, I think there would be a difference.
_____ no, I don't think there would be a difference.

8. In the following question, in the blank to the left of the statement indicate how you think most Freshmen and Sophomores would check the statements. Place the number 1 before the statement you think most Freshmen and Sophomores would check; place the number 2 before the statement you think most Freshmen and Sophomores would be next most likely to check.

In the blank to the right of the statements, indicate how you think most Juniors and Seniors would check the statements. Place the number 1 beside the statement you think most Juniors and Seniors would check; place the number 2 beside the statement you think most Juniors and Seniors would be next most likely to check.

Freshmen and Sophomores		Juniors and Seniors
_____	They would never vote to allow the Negro to buy the house.	_____
_____	Most of the time they would vote against allowing the Negro to buy the house, although under some conditions they might vote to allow him to buy the house.	_____
_____	It would be a toss-up for them as to whether or not they would vote to let him buy the house; it would be about a 50-50 choice.	_____
_____	Most of the time they would vote to allow the Negro to buy the house, although under some conditions they might vote against letting him buy.	_____
_____	They would always vote to allow him to buy the house.	_____

9. What is your own year in college? (Check one.)

_____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Other (specify what) _____

Below are listed several groups of people. Indicate in column 1 beside each group, whether or not you feel the people represented by this group would agree or disagree with your position on this question. In column 2 indicate which of the groups you would most like to be in agreement with on this issue. In column 3 indicate those groups with which you expect to disagree.

Group	Agree with me. (Yes or No)	I would like to agree with	I expect to disagree with
College students in general			
College men			
College women			
Fraternity men			
Sorority women			
Catholic students			
Protestant students			
Jewish students			
Non-Greek students			
Democrats			
Republicans			
Socialists			
Communists			
People in business			
Factory workers			
College teachers			
Your parents			
Your close friends			
Your parents' friends			
Negro students			
Country Club members in your home town			
Large-city residents			
Small-town residents			

Which of the following groups do you think should be excluded from voting in national and state elections when important issues are at atake?

Place the number 1 before those groups you think should always be excluded.
Place the number 2 before those groups you think should usually be excluded.
Place the number 3 before those groups you think should sometimes be excluded.
Place the number 4 before those groups you think should never be excluded.

_____Illiterates, those who clearly cannot read or write.

_____Semi-literates, those who have not gone beyond the fourth grade of elementary school.

_____Very poorly educated, those who have not gone beyond elementary school.

_____Poorly educated, those who have not gone beyond the tenth grade.

_____High-school graduates.

_____Criminals, anyone who has ever been convicted of a felony.

_____Racketeers, individuals who have not been convicted but are known to be associated with rackets.

_____Debtors and bankrupt people who have shown themselves to be financially irresponsible.

_____Communist party members.

_____Communist sympathizers and fellow travelers.

_____Socialists.

_____Neurotics, those who have had a nervous breakdown or who have been treated by a psychiatrist.

_____Atheists.

_____Negroes.

_____Housewives.

_____Naturalized citizens, foreigners who have become naturalized.

BIBLIOGRAPHY

1. Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., and Sanford, R. N., The Authoritarian Personality, New York, Harper and Brothers, 1950.

2. Allport, G. W., Attitudes, in Murchison, C. (ed.), A Handbook of Social Psychology, Worcester, Clark University Press, 1935.

3. Asch, S. E., Studies in the Principles of Judgments and Attitudes: II. Determination of Judgments by Group and Ego Standards, J. Soc. Psychol., 1940, XII, 433-465.

4. _____, Effects of group Pressure upon the Modification and Distortion of Judgments, in Swanson, G. E., Newcomb, T. M., and Hartley, E. L., Readings in Social Psychology, New York, Henry Holt & Co., 1952.

5. _____, Block, and Hertzman, M., Studies in the Principles of Judgments and Attitudes: I. Two Basic Principles of Judgment, J. Psychol, 1938, V, 219-251.

6. Berenda, R. W., The Influence of the Group on the Judgments of Children, New York, King's Crown Press, 1950.

7. Bogardus, E. S., Fundamentals of Social Psychology, New York, Century, 1931.

8. Bowden, A. O., Caldwell, F. F., and West, G. A., "Halo Prestige," J. Abn. and Soc. Psychol., 1934, XXVIII, 400-406.

9. Bruner, J. S., Personality Dynamics and the Process of Perceiving, in Blake, R. R., and Ramsey, G., V., Perception--an Approach to Personality, New York, Ronald Press, 1951.

10. _____, and Postman, L., Perception, Cognition and Behavior, in Bruner, J. S., and Krech, D., Perception and Personality, Durham, Duke University Press, 1950.

11. _____, On the Perception of Incongruity: A Paradigm, in Bruner, J. S., and Krech, D., ibid.

12. Burdick, H., The Effects of Group Norms on Conformity, unpublished manuscript, 1952.

13. Cantril, H., Experimental Studies of Prestige Suggestion, Psych. Bull., 1937, 34, 528-535.

14. Collier, R. M., The Effect of Propoganda upon Attitude Following a Critical Examination of the Propoganda Itself, J. Soc. Psychol., 20, 1944, 3-17.

15. Coombs, C. H., Psychological Scaling without a Unit of Measurement, Psych. Rev., 57, 1950, 145-158,

16. Coombs, C. H., Scaling Theory, in Festinger, L., and Katz, D., Research Methods in Social Science, New York, Dryden Press, in press.

17. Duncker, K., Experimental Modification of Children's Food Preferences through Social Suggestion, J. Abn and Soc. Psychol., 1938, 33, 489-507.

18. Folsom, J. K., Social Psychology, New York, Harper, 1931.

19. Festinger, L., Back, K., Schachter, S., Kelley, H. H., and Thibaur, T., Theory and Experiment in Social Communication, Ann Arbor, Edwards Brothers, Inc., 1950.

20. French, V. V., The Structure of Sentiments, 1947, J. Person., 15, 247-282, 16, 78-108.

21. Frenkel-Brunswik, E., Levinson, D. J., and Sanford, R. N., The Anti-Democratic Personality, in Swanson, E., Newcomb, T. M., and Hartley, E. L., Readings in Social Psychology, New York, Henry Holt & Co., 1952.

22. Guttman, L., and Suchman, E. A., Intensity and a Zero-Point for Attitude Analysis, Amer. Sociol. Rev., 1947, 12, 57-67.

23. Hilgard, E. R., The Role of Learning in Perception, in Blake, R. R., and Ramsey, G. V., Perception--An Approach to Personality, New York, Ronald Press, 1951.

24. Horowitz, E. L., The Development of Attitudes toward the Negro, Arch. Psychol., 1936, 28, No. 104.

25. Hovland, C. I., Lumsdaine, A. A., and Sheffield, F. D., Experiments on Mass Communication, Princeton, Princeton U. Press, 1949.

26. Katz, D., The Measurement of Intensity, in Cantril, H. (ed.), Guaging Public Opinion, Princeton, Princeton U. Press, 1944.

27. _____, Attitude Change as a Function of Expression of Resistance, Unpublished Manuscript, 1952.

28. Ken Ching Chen, The Influence of Oral Propaganda upon Students' Attitudes, Arch. Psychol., No. 154.

29. Krech, D., and Crutchfield, R. S., Theory and Problems of Social Psychology, New York, McGraw-Hill, 1948.

30. Krechevski, I., Hypotheses in Rats, Psychol Rev., 1932, 39, 516-532.

31. Lewis, H. B., Studies in the Principles of Judgment and Attitudes: IV. The Operation of "Prestige Suggestion," J. Soc. Psych., 1941, XIV, 229-256.

32. Likert, R., A Technique for the Measurement of Attitudes, Arch. Psychol., 1932, No. 140.

33. Lorge, I., Prestige, Suggestion, Attitudes, J. Soc. Psychol., 1936, VII, 386-402.

34. Marks, M. R., Two Kinds of Experiments, Distinguished in Terms of Statistical Operations, Psych. Rev., 1951, 58, 179-184.

35. Mood, A. M., Introduction to the Theory of Statistics, New York, McGraw-Hill, 1950.

36. Moore, H. T., The Comparative Influence of Majority and Expert Opinion, Amer. J. Psychol., 1921, 32, 16-20.

37. Morlan, G. K., A Note on the Frustration-Aggression Theories of Dollard and His Associates, Psych. Rev., 1949, 56, 1-8.

38. Nelson, E., Attitudes: I. Their Nature and Development, J. Gen. Psychol., 1939, 21, 401-416.

39. Newcomb, T. M., Personality and Social Change, New York, Dryden, 1943.

40. _____, Social Psychology, New York, Dryden, 1950.

41. Postman, L., Toward a General Theory of Cognition, in Rohrer, J. H., and Sherif M., Social Psychology at the Crossroads, New York, Harper, 1951.

42. Remmers, H. H., Further Studies in Attitude, Series II, Studies in Higher Education XXXI, Bulletin of Purdue Univ., 1946, 37, No. 4.

43. Rogers, C., Client Centered Therapy, Boston, Houghton Mifflin, 1951.

44. Rose, A. M., Studies in Reduction of Prejudice, Chicago, American Council on Race Relations, 1947.

45. Saadi, M., and Farnsworth, P. R., The Degree of Acceptance of Dogmatic Statements and Preference for Their Supposed Makers, J. Abn. and Soc. Psychol., 1934, XXIX, 143-150.

46. Sherif, M., A Study of Some Social Factors in Perception, Arch. of Psychol., 1935, No. 187.

47. Sherif, M. and Cantril, H., The Psychology of Attitudes: I, Psych. Rev., 1945, 52, 295-319.

48. _____, The Psychology of Attitudes:II, Psych. Rev., 1946, 53, 1-24.

49. Shipley, T. E., and Veroff, J., A Projective Measure of Need for Affiliation, J. of Exp. Psych., 1952, 43, 349-356.

50. Smith, F. T., An Experiment in Modifying Attitudes toward the Negro, New York, Teachers College, Columbia, Univ., 1943.

• Smith, K., Distribution-Free Statistical Methods and the Statistical Concepts of Power and Power Efficiency, in Festinger, L. and Katz, D., Research Methods in Social Science, New York, Dryden Press, inppress.

52. Stouffer, S. A., Suchman, E. A., DeVinney, L. C., Star, S. A., and Williams, R. M., Jr., The American Soldier: Adjustment During Army Life, Princeton, Princeton Univ. Press, 1949.

53. Strauss, A., The Concept of Attitude in Social Psychology, J. Psychol., 1945, 19, 329-339.

54. Suchman, E. A., The Intensity Component in Attitude and Opinion Research, in Stouffer, S. A., Guttman, L., Suchman, E. A., Lazarsfeld, P. F., Star, S. A., and Clausen, J. A., Measurement and Prediction, Princeton, Princeton Univ. Press, 1950.

55. Thomas, W. I., and Znaniecki, F., The Polish Peasant in Europe and America, Boston, Badger, 1918.

56. Thurstone, L. L., Theory of Attitude Measurement, Psychol. Bull, 1929, 36, 222-241.

57. _____, The Measurement of Social Attitudes, J. Abn. and Soc. Psych., 1931, 26, 249-269.

58. _____, Motion Pictures and the Social Attitudes of Children, New York, MacMillan, 1933.

59. Tolman, E. C., Cognitive Maps in Rats and Men, Psych Rev., 1948, 55, 245-268.

60. Williams, R. M., Jr., The Reduction of Intergroup Tensions, Bulletin No1 47, Social Science Research Council, 1947.