



The temporal persistence of attitudes induced through required training

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THE TEMPORAL PERSISTENCE OF ATTITUDES INDUCED
THROUGH REQUIRED TRAINING

by

John Dee Driskill

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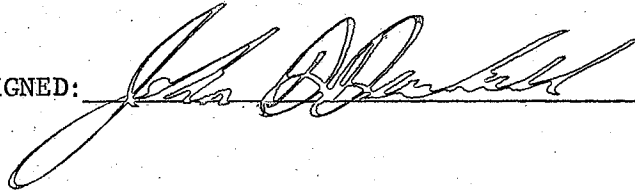
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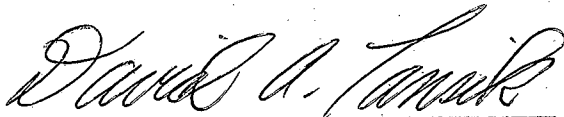
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This thesis has been approved on the date shown below:



DAVID A. TANSIK

Associate Professor of Management



Date

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ABSTRACT

A posttest only control group design was used, and a semantic differential questionnaire administered to five different time groups, ranging in time from immediate to eight weeks at two-week intervals, in a cross-sectional study of the effects of time on induced ethnic attitudes. Comparison with a control group indicated that some ethnic attitudes were affected more than others by the required training, but that by the end of the eight-week period all of the ethnic attitudes had essentially returned to their premanipulative positions.

Based on the environmental conditions present in this study it was predicted that a "sleeper effect" would not emerge. However, in four of the five ethnic areas this is what occurred. This occurrence tends to lend support to the "low credibility source and initial resistance" theory of generating a sleeper effect.

This study concluded that required training as conducted in this instance, on the subject of ethnic attitudes, is not persistent over time. This is possibly due to the high degree of ego involvement inherent in this subject.

CHAPTER 1

INTRODUCTION

Experience and interaction with one's environment are the building blocks by which attitudes are formulated. Attitudes are learned and implicit, that is they are inferred states of the individual that are acquired in the same manner that other internal learned dispositions are acquired. Generally, social attitudes are not acquired through explicit instructions, but are learned through observing the conduct of others (Shibutani 1961, p. 387). As attitudes are acquired through the learning process, social scientists take it for granted that attitudes are subject to change (Thurstone and Chase 1929, p. 9). Training, of one form or another, is the method normally used to induce a change in the behavior and attitudes of an individual in the desired direction. The idea has become so prevalent in management circles, that the National Training Laboratories has had to establish several laboratories for the training of middle and upper management (Bradford, Gibb and Benne 1964, p. 20).

Literature on the subject of induced attitude change abounds. There have been a large number of theories advanced to explain the induction of an attitude change, and how the individual will react to the induction process. The preponderance of empirical studies focusing on attempted attitude change indicates that whatever method was utilized

was successful in accomplishing a significant attitudinal change. However, "It is not enough to know that a given variable has a short-term effect; most applications of research findings require long term effects" (Insko and Schopler 1972, p. 80). Studies on the persistence of the induced attitude have not been as numerous, nor have the results been as consistent as those focusing only on the immediate effects of induction. The results of studies done on the persistence of induced attitude changes have ranged from a complete decay of the induced change to complete retention, to partial decay and partial retention, to a significant increase in the intensity of the induced change with the passage of time (Watts and McGuire 1964, Watts 1967, Cook and Insko 1968).

Purpose and Scope

The Department of Defense (DOD) in late 1970 established a policy that all military members and civilian employees in supervisory positions would participate in a training program designed to alter the behavior of its members toward different ethnic groups. The Department of Defense Race Relations Institute is responsible for the training of all DOD race relations instructors. In order to evaluate its program, a research survey of the pretest-posttest control design was conducted and a significant positive attitude change on the part of the students was reported (DRRI Research Report I 1971). The Management Analysis Branch of the Comptroller Division at Lockborne Air Force Base, Ohio, conducted a study of its race relations program using the static group comparison design and determined that a positive attitude change was

being induced (SAC Study 74-15 1974). Both of these studies used an immediate posttest, and no attempt has been made, to the best of the author's knowledge, to measure the temporal persistence of the induced attitude changes.

The validity of the conclusions of these studies is questionable, because the posttest may have only measured a temporary phenomenon, and not actual attitude change. In reference to accepting only an immediate posttest, as a method to draw conclusions, Campbell and Stanley (1963, p. 31) warn " . . . long term effects are not only quantitatively different, but also qualitatively different." This paper will attempt to overcome what the author believes is a weakness in the previous studies on the effects of race relations training, by introducing the time variable with a series of posttests. A DOD installation in the south-western part of the United States served as the field site. Posttests were administered to five separate classes, in such a manner that only one test was administered to each class. The time period ranged from immediate to eight or nine weeks following participation in the race relations training program. The delayed posttest allowed time to have an effect on the professed attitude of the subjects, and indicated the amount of attitude change that was retained.

There was no attempt to determine what was morally correct, or what were acceptable beliefs on the part of the individuals participating in this study. In keeping with the confidentiality promised the authorities of the field site, its identification will not be revealed.

Ethnic Attitudes Defined

DeFleur and Westie (1963) conducted a survey of books and articles on the subject of attitudes, and after reducing all of the definitions to their simplest terms still found that they had 23 distinct definitions for the concept of "attitude." They concluded that, "The concept of attitude is still in a surprisingly crude state of formulation considering its widespread use. At best it barely qualifies as a scientific concept" (DeFleur and Estie 1963, p. 30). More recently Fishbein and Ajzen (1972, p. 488), concluded that even though the term attitude has been in use in psychology for over one hundred years, ". . . there exists no commonly accepted definition of the attitude concept."

The majority of social scientists would agree that an attitude consists of affective, cognitive and behavioral components (Ostrom 1969). Kernan and Trebbi (1973) note that most measurements of attitudes are in reality, only measuring the affective component, but that if attitude assessment is all that is desired, this measurement is adequate. The relationship among the different attitude components is so close that it does not make any difference which component is measured in determining the attitude toward any specific thing or group of things (Harding et al. 1954, Fishbein 1966). McGuire (1969) has indicated further, that the distinction between beliefs, attitudes, opinions and intentions is not warranted as these variables have not been shown to behave in different manners.

For the purpose of this paper, opinions will be considered synonymous with attitudes. Attitude will be defined as a predisposition

to react in either a favorable or unfavorable manner to a given stimulus. The behavior of the individual may or may not be congruent with his predisposition; the situation in which the stimulus is perceived will normally dictate the reaction.

Ethnic attitudes will be defined, as a predisposition to react in a favorable or unfavorable manner " . . . toward one, some, or all members of an ethnic group other than his own . . . " (Harding et al. 1954, p. 1030). The stimuli used to determine the ethnic attitude of the subjects will consist of descriptive terms used in the context of the race relations training program to denote different ethnic groups.

All of the social science literature reviewed by the author indicates that an attitude that contains a high degree of ego involvement will be more resistant to change than one that is low in ego involvement. Ethnic attitudes are the product of the individual's ego (Katz 1971) and his environment, and as such serve him as an ego defensive mechanism (Malec 1971). Initially, in reaction to the compliance process (Kelman 1958) it is expected that a professed attitude change will be measured, but that with the removal of surveillance, and no chance for the identification process to have an effect, the attitudes will return to their original position. A short formal race relations course is not expected to have the manipulative power to change the individual's value system.

CHAPTER 2

REVIEW OF PREVIOUS RESEARCH

As previously discussed, the results of research on induced attitude persistence have been inconsistent. Fishbein and Ajzen (1972, p. 489), commenting on the results of experimental research state, ". . . reports of inconsistencies point to the possibility that the different manipulations and labels are far from equivalent." Sherif, Sherif and Nebergall (1965, p. 203) contend that "Many of the puzzles in attitude research and the contradictory conclusions are unravelled when we focus upon the conditions and stimulus arrangements in which the findings were obtained." They believe that the degree of attitude change and its persistence is dependent on the amount of ego involvement, and warn about making generalizations about attitude changes based on the results of laboratory studies that normally use unfamiliar and un-involving issues.

The actual number of studies that focus specifically on the temporal persistence of an induced attitude change is limited. The vast majority of the research efforts have focused on the effects of such things as source credibility, degree of subject participation, role playing, type of communications medium used and the repetition of the communications message on the degree of attitude change. Most

researchers have only secondarily studied the temporal effect on the persistence of the induced attitude change. McGuire (1969, p. 258)

notes:

The time variable is an attractive one to psychologists, since it tends to have an impact on many aspects of behavior and consciousness, is potentially relevant to a wide range of theorizing, and is capable of precise quantification and variation. In view of these and other attractions, it is surprising that this independent variable has been exploited as little as it has in attitude-change experiments.

Persistence, Decay and the Forgetting Curve

Thurstone and Chase (1929) recognized that the measurement of a man's opinion was by no means an enduring constant, but did not attempt to determine what effect time would have on the measurement. "The most obvious a priori expectation is that the decay curve will parallel the negatively decelerating forgetting curve" (McGuire 1969, p. 253). Forgetting is the loss of recall of information, whereas decay, as used in this sense, is the reduction of the predisposition to react in a given manner to a given stimulus. This predisposition to react may or may not be based on factual knowledge, and if it is based on knowledge the recall of the facts may have been lost, but the reaction predisposition retained.

Earlier researchers in the field of attitudes assumed that the induced attitude change would follow the forgetting curve, and were surprised to find that the results of their study did not do so (Hovland, Lumsdaine and Sheffield 1949). Later research on the effects of time on the induced attitude change indicated that the induced attitude did decay in a pattern similar to that of the forgetting curve (Miller and

Campbell 1959, Insko 1964). However, both of these studies allowed only a one-week delay prior to the final posttest. Watts and McGuire (1964) in a six-week study of message retention and opinion change found that the decay rate function declined monotonically. In the first week of this study the decay curve did essentially follow the forgetting curve, but it did not decrease in the same manner after the first week. Retention of the content of the attitude inducing message did follow the negatively decelerating forgetting curve. Cook and Insko (1968) in an eleven-day study on the legislative process also found that the rate of attitude decay essentially declined monotonically. One may speculate that if the studies by Miller and Campbell (1959) and Insko (1964) had lasted for a longer period of time that the results may have been different, in that their results may have declined in a monotonic manner too.

The Bartlett (1932) effect which proposes that there are qualitative changes in retention over time, such that main points stand out and details are forgotten was the subject of a 41-day study by Papageorgis (1963). He found that the attitude induced by persuasive communications did not decay to the same degree that the contents of the attitude inducing message were forgotten.

Watts and McGuire (1964, p. 233) in summing up the research on induced attitude decay and the forgetting curve have stated:

Research on the persistence of induced opinion change yields abundant evidence that there is no such thing as the decay function of persuasion. Rather, there is a wide variety of such functions reflecting variations in the communication situations that induced the change.

McGuire (1969, p. 243) reiterated this position when he said, "With so many factors affecting the rate of decay, it is probably inappropriate to discuss in any detail parameters of 'the' decay function." Bingham and Cook (1969, p. 243), in commenting on the relationship between induced attitude change persistence and memory concluded that: ". . . if it exists at all, (that is, the relationship) applies only under certain conditions. It is evident that the specific nature of these conditions is not as yet fully understood."

The results of research on the persistence of induced attitudinal change fall into four broad areas. These areas are: the total decay of the induced change, partial persistence of the induced change, complete or near complete persistence of the induced change and the delayed action or increased attitude change with the passage of time. Peterson and Thurstone (1933) found all of these results in one study that took two years to complete. They used a great number of experimental groups in their investigation of the effects of viewing motion pictures on the attitudes of rural children.

Kelman (1958) is the only social scientist discovered by the author that has proposed a theory to explain the temporal persistence of induced attitude changes. Other authors have proposed theories for the specific results of their studies, but none has attempted to theorize broadly on the entire spectrum of persistence results. The logic behind Kelman's (1958) theory appealed to the author on a pragmatic basis and he felt that it would be a useful vehicle in which to frame the diverse findings of the research in this area. This theory will be examined and the literature examined using it as a framework.

Kelman's Conditions for Persistence

Kelman (1958) presents a theory of attitude change which attempts to explain the amount of persistence that an induced attitude change will contain. In a later article (Kelman 1961) he changed the theory from one of attitude changes to one of opinion changes. At still a later date in an unpublished speech, he changed his theory to "a framework" for the analysis of social influence (Kiesler, Collins and Miller 1969). His theory ". . . starts with the assumption that opinions adopted under different conditions of social influence, and based on different motivations, will differ in terms of their qualitative characteristics and their subsequent histories" (Kelman 1961, p. 60).

Kelman (1958) distinguishes three processes of social influence: compliance, identification and internalization. These are not mutually exclusive processes and seldom occur in a pure form. Most attitudes consist of some combination of these processes. Compliance occurs when an individual accepts influence because he hopes to receive a favorable reaction from another person or group. He adopts the induced attitudes and behavior, not through a belief in them, but because he hopes to gain some reward or escape some punishment. The persistence of the attitude change induced through the compliance process is such that ". . . he tends to perform only under conditions of surveillance by the influencing agent" (Kelman 1958, p. 54).

Identification occurs when an individual accepts influence from another individual or group, because the behavior and attitudes induced are associated with satisfying self-defining relationships. The

relationships may consist of role adoption, or take the form of reciprocal roles with significant others. The individual believes in the behavior and attitudes he adopts because it is associated with the desired relationship. The persistence of the attitude change induced through the identification process is such that the individual ". . . tends to perform it only under conditions of salience of his relationship to the agent" (Kelman 1958, p. 54).

Internalization occurs when the individual accepts influence because the induced attitudes and behavior are congruent with the individual's value system. The induced attitudes and behavior are integrated into the individual's existing system of values. The persistence of internalized induced attitude changes are described as, "When an individual adopts an induced attitude response through internalization, he tends to perform it under conditions of relevance of the issue, regardless of surveillance or salience" (Kelman 1958, p. 54). This theory will be used in the review of previous research because it lends itself readily to explaining the diverse results found in the literature. Using one or a combination of these processes enables one to view the results in a meaningful framework.

For some reason Kelman has only conducted one experiment to specifically test this theory, and the results of his 1958 study support it (Kiesler et al. 1969, Insko and Schopler 1972). In the study he examined the amount and persistence of attitudes induced using a high power source, a high attractiveness source and a high credibility source as manipulating agents. The group that was manipulated by the high

power source displayed an attitude change under surveillance, but when surveillance was removed, and with a two to three week time period allowed to pass, this group failed to display a significant change. The group that had been manipulated by the high attractiveness source, also indicated decay in their attitudinal change with the passage of time and the removal of the salience condition, but the change that was retained was found to be significant. The group manipulated by the high credibility source indicated the least amount of attitude decay over the same time period.

The Compliance Process

This process probably accounts for the majority of the large attitudinal changes that are measured in an immediate posttest situation. This would be especially true in those studies that utilize college students as their subjects, as do the majority of the studies reviewed. College students have been conditioned to be sensitive to the desires of their professors, and it is highly probable that where the researcher is not the professor of an individual subject he will influence the results of the experiment by virtue of his position. Kelman and Hovland (1953) lend support to this idea in a study in which high and low credibility sources were used in an attempt to produce a delayed attitude change. Half of the individuals in both groups had the source of the information reinstated after a four-week period and were retested. Those subjects that had been reminded of the source of the manipulative communication reacted much as they had on the immediate posttest, and the other groups reacted as had been expected. "If the

audience is reminded of the source, there is relatively little change over time. But normally there seems to be a tendency to dissociate the content from the source and consequently the positive (or negative) influence of the source declines with time" (Hovland, Janis and Kelley 1953, p. 281). Similar results were achieved in a study by Cook and Insko (1968) using persuasive communications that differed in terms of the number of value-linking arguments. In the 11-day study all attitudes were found to have decayed by 50 percent, with the exception of those groups that had been reexposed to the conclusions of the persuasive messages, they exhibited an increased attitude change. Recalling the conclusions and sources may have also reintroduced the perceived sanction system of the researcher, and caused the compliance process to be reactivated.

The application of sanctions in the form of mild electric shocks was used by Diven (1937) in his discovery of the incubation effect. He would use the shock to condition a subject to the proper response to a stimulus word. A ten-minute rest period was allowed following the conditioning treatment, at the end of the rest period, subjects displayed an increased anxiety state at the mention of the stimulus word. In a footnote Diven reported that he had attempted on a limited scale, to measure the degree of anxiety after a two-week period, and that the increased intensity was still present. This experiment has been replicated several times (Bindra and Cameron 1953, Mednick 1957, Breznitz 1967) with more extensive controls, but without an attempt to measure the anxiety induced over a long period.

In a study using small group discussion and group decision making Lewin (1958) was able to affect attitudes toward specific foods previously considered unattractive by the subjects. This attitude continued to be retained after a four-week period. However, the groups had been forewarned that they would be observed again at a later date, and the author indicates that this may have had an impact on their professed attitudes.

A pro-con and con-pro sequence of persuasive communications was used in a study of recency and primacy effects by Miller and Campbell (1959) and replicated with the same results by Insko (1964). If the pro side was heard and a week later the con side, the immediate attitude measured would be con. However, if another week was allowed to elapse there was no definite pattern to the side taken, and both reflected an attitude decay on the order of 50 percent. Perhaps the subjects were confused as to which position was desired by the researchers. There was no confusion in the study by Annis and Meier (1934) in which the subjects were required to read pro or con editorials, planted in the school paper, as part of their course work. After a four-month period they reflected the attitudes of the editorials.

In a series of studies by McGuire (1960a, 1960b, 1960c, 1964a) the different persuasive messages used were dissonance increasing and decreasing, and refutational as opposed to supporting messages to induce attitude changes. He found after a one-week period, that in all cases the induced attitudes had decayed by 50 percent, but were still significant when compared to the pretest. Similar results were obtained by

Dietrich (1946) in a two-week study comparing the effects of styles of delivery of radio messages on attitude. Watts and McGuire (1964) found that only 31 percent of an attitude change induced by high and low credibility sources was present after a delay of six weeks. Sims (1938) used a 40-minute propaganda lecture on the Tennessee Valley authority and found an insignificant amount of attitude change after three months. The results of an 18-minute propaganda lecture on Japanese and Chinese by Chen (1936) produced no attitude change after five months. In all of these studies the initial posttest had indicated that attitudes had been changed, but when the position of the researcher on a subject was not perceived on the posttest, decay resulted.

The compliance process was inherent in the situation chosen by Redfering (1971) to measure the effects of group counseling. His subjects were a group of female delinquents who were confined in a correctional institution. One year after the group counseling sessions, the attitude induced, although decayed, was still significant when compared to the control group.

The compliance process, with its focus on favorable and unfavorable sanctions, and dependent on conditions of surveillance by the influencing agent to affect attitudes appears to have been operating in the studies reviewed. This seems to account for the high degree of attitude changes found on immediate posttest, and in two of the studies, when information conducive to the recall of the influencing agent was presented to part of the subjects, they reverted to their initial posttest positions as opposed to the remainder of the experimental groups that exhibited the expected attitude decay.

The compliance process will affect the subjects of the current study for the week that they are in training. It is expected that they will initially indicate a significant attitude change. However, as in the majority of the studies reviewed this effect is expected to decline rapidly with time and the removal of surveillance.

The Identification Process

The sleeper effect is a phrase coined by Hovland et al. (1949) to describe the situation that occurs when attitudes become stronger with the passage of time. It appears to be related to Diven's incubation effect in which anxiety increased over time in relation to a stimulus word. However, the incubation effect is attained via the compliance process and the sleeper effect is thought to occur through the identification process. Peterson and Thurstone (1933) originally discovered this effect while studying the effects of motion pictures on rural children. Motion pictures were not normally a part of the children's day-to-day experiences, and were considered a significant event. They found the sleeper effect in two groups: one after a four-month delay and the other after a six-month delay. Peterson and Thurstone (1933) theorized that the sleeper effect was probably caused by the discussions among the children after viewing a motion picture. Festinger (1955, p. 199) also attributes the sleeper effect to the operation of social influences and interaction among the members of an experimental group between the time of manipulation and the posttest.

The sleeper effect was rediscovered and named in the course of a study of the effects of training films on soldiers during World War II.

It was found that the attitudes induced by viewing the movie, "The Battle of Britain," were greater nine weeks after viewing the film, than immediately after. Retention of facts from the movie was 43 percent after nine weeks but the induced opinion change was greater than 100 percent when compared to the immediate posttest. At that time Hovland et al. (1949, p. 273) theorized that "Opinion changes should correspond to substance learning, which is usually well retained, whereas changes in factual knowledge would correspond more nearly to rote learning of details, which ordinarily shows a relatively rapid rate of forgetting." Another theory put forth by this group to explain the sleeper effect was the subject of a study by Hovland and Weiss (1951). This theory was that the sleeper effect was caused because the individuals perceive the manipulative communication as propagandistic, and consequently would undergo a small amount of attitude change. But time would cause the source to be forgotten, and the effects of the manipulative message would be retained. Identical persuasive messages were used by high and low credibility sources; the high source group exhibited the greatest degree of initial attitude change, but at the end of a four-week period the attitude change in both groups was the same. Kelman and Hovland (1953) used the same experiment, but reinstated the source, with the results noted in the previous section.

Stotland, Katz and Patchen (1959, p. 511) theorized in line with Hovland et al. (1949) that "Immediate resistance may be aroused to some aspect of the critical situation or attempt at induction, which may be dissipated over time, permitting the influence to manifest a delayed or

sleeper effect." Their manipulative device was case histories of persons with ethnic prejudices as the principle subject. The persons in the cases were presented as being "less than admirable" to a group of subjects that had indicated similar ethnic prejudices. After a three to four week delay, a sleeper effect was displayed in two of the four areas in which attitude change had been attempted. However the degree of attitude change in all four areas was found to be significant.

The experimental groups in these studies were all fairly homogeneous: soldiers, children in a small town and college students. The soldiers all belonged to the same organizations and viewed the training films as an organization. The college students were typically majoring in psychology, and in all probability shared common classes. The children viewed the movie as a group, and as these were small towns, probably shared a common social life. The manipulative devices used were of an interesting nature; racial prejudice and current issues for the college students; a propaganda film for the soldiers, in a period that the U.S. society as a whole was becoming more pro-British and anti-German; the disturbing of routine, by having a movie shown especially for the children. In the studies of sleeper effects reviewed above, it would seem as though the identification process was operational. In fact, it may offer the only explanation for the attitude reversal found in one case by Peterson and Thurstone (1933). In that particular case a group that viewed "All Quiet on the Western Front," a movie that normally produced anti-war attitudes, was found to exhibit pro-war attitudes after a delay of eight months.

Other studies that have attempted to induce sleeper effects, and used homogeneous groups as subjects, but failed to induce the effect, have not used manipulative communications that would call for a great amount of discussion by the groups. Watts and McGuire (1964), for example, used "Puerto Rico should be admitted to the union as the 51st state" as one of the areas in which they desired to change attitudes. Cook and Insko (1968) used a tape-recorded argument that the President of the United States should be elected by Congress. Johnson and Watkins (1971) used tape-recorded arguments on the subject of chest X-rays and the detection of tuberculosis as opposed to skin tests. Dietrich (1946, p. 64) says, "The amount of interest expressed in the program is positively and significantly related to the effect of the program in influencing the subject's attitudes." The author doubts that any of these subjects would call for much discussion or interaction within the experimental groups.

The race relations training program will have a subject that should call for discussion, and be subject to social influence and interaction by the experimental group. In accordance with the theories set forth by Hovland and Weiss (1951) and Stotland et al. (1959) above, the race relations training program should readily lend itself to the emergence of a sleeper effect. However, group homogeneity only exists for the duration of the course. At the end of the five-day training program individuals are returned to their respective units and peer groups. The identification process cannot exist in this situation without the group and the induced attitudes may be expected to decay rapidly.

The sleeper effect is not the only outcome of the identification process, and this process will be used as a framework to discuss other research findings. Hall (1938) in a six-month experiment found that his subjects had retained induced attitudes in three of four social areas. The area that totally decayed was "labor unions," while the three that were retained were "capital punishment," "social insurance," and "Negroes." Feather (1963, p. 162) indicates that persons that already hold an attitude on a subject are more sensitive to information relevant to that subject. Labor unions in this study may have been an area of low interest to the subjects, and may not have been involved in the identification process. In another six-month study Cherrington and Miller (1933) utilized anti-war lectures to induce attitudes. Although there was a small amount of decay indicated, the attitudes had remained anti-war. This was also a period in U.S. history in which the social climate was isolationist and anti-war in nature, and may have affected their findings. Rokeach (1971) in a study that covered a period of 17 months on the effects of a series of lectures on freedom, equality and equal rights for Negroes found a significant residual attitude change. The pro-civil rights social climate in the U.S. and especially on university campuses, acting through the identification process may be largely responsible for the outcome of this study and not the effects of the lecture series.

Active as opposed to passive participation has been used as the manipulative device in studies by Watts (1967), Mitnich and McGinnies (1958) and McFall and Twentyman (1970). These studies indicate that

over periods ranging from one month to six weeks, that those groups that actively participated in the manipulative situation retained a higher degree of attitude change than did those that merely observed. This finding is also true of group settings in factories (Coch and French 1958), and insurance companies (Baum, Sorenson and Place 1970). Different intensities of human relations training were the variables used with two homogeneous groups by McConnel (1971). He found that after a three-month period, the group that had undergone the less extensive training had retained the larger amount of attitude change. Participation and interaction within the experimental group, would seem to aid in the operation of the identification process.

As previously mentioned, the students of the race relations training program will be brought together for this one-week program. They will represent a wide variety of ethnic and social backgrounds, and any group cohesiveness that develops during the training period will be destroyed as the group is broken up to return to their parent organizations. If Kelman's theory of attitude persistence and the identification process is valid, the induced ethnic attitudes will not persist.

The Internalization Process

The internalization process by its definition is dependent on ego involvement of the individual. In their writings on ego involvement, attitudes and attitude change, Sherif et al. (1965, p. vi) have stated:

It is one thing to change a person's momentary guess in a laboratory atmosphere on the topic, say, of the number of leaves on a tree or his preference for one brand of candy over another. It is another thing to try to change the person's commitment to the value of the family, to his religion, to his politics,

to his stand on the virtue of his way of life . . . the latter are among his ego-involved attitudes . . . As such they are not transitory ingredients in his psychological make-up, to be abandoned lightly when he confronts a discrepant position on an issue

McGuire (1969) recognized that ego involved attitudes are harder to change than more superficial attitudes in his "loose-link" model. In this model a person's attitudes are seen as loosely linked chains anchored to a set of firm beliefs and values. It takes only a small amount of power to move the attitude chain, but a much greater application of power to move the anchors holding the chain in place, as this requires that the values themselves be uprooted. Edwards (1941, p. 34) in commenting on the retention of induced attitudes and the effect of the ego on retention said, " . . . any experience which conflicts with the ego's desires will tend to be forgotten more readily than those which do not." He views the retention of experiences from everyday life as an interaction between the experiences and the individual's internal values, desires, wishes and attitudes.

Congruency and incongruency of premanipulation attitudes and the manipulative communication was the subject of a study by Levine and Murphy (1943). They found that following a five-week period, the group that received persuasive messages that were congruent with their pre-manipulative attitudes retained a greater degree of attitude change than the group that received messages incongruent with their initial position. This finding supports the contention of Sherif and Sherif (1969) that persons with definite stands are less likely to change their attitudes when presented with a one-sided communication than when presented with

a two-sided communication (Mitnich and McGinnies 1958, Hovland et al. 1949).

"The results of the Harlem experience . . . were for the most part inner, rather than overt. They consisted in reorientation of feelings and attitudes, and in a new mind set toward Negroes . . ." was the way Smith (1943, p. 118) described the results of his study. Cultural contacts with outstanding Negro leaders in a seminar conducted for four days in Harlem was used to alter the attitude toward Negroes. After a ten-month period "The experimental gain of the group as a whole has been largely permanent" (Smith 1943, p. 96). The identification or compliance processes cannot be totally ruled out in this case, as the subjects were university students enrolled in a class together and taught by Smith.

Hypnosis was used to manipulate the cognitive component of experimental subjects' attitudes in a study by Rosenberg (1960). The affective component was found to change in order to be congruent with the cognitive component. The attitudinal change lasted for the duration of the five-day experiment. When the hypnotically induced amnesia was removed, all subjects reverted to their original attitudes.

In research situations where a more ego involving approach was used, role playing and the empathy produced seems to bring about a high degree of internalization. Playing the part of a disabled person in a wheel chair, and actually using the chairs in their daily activities resulted in a totally persistent attitude change after a four-month period (Clore and Jeffery 1972). Janis and Mann (1965) had subjects

that were heavy smokers role play as cancer patients. The researcher played the role of the doctor using actual X-rays and a great deal of distressful information on the dangers of smoking. At the end of a two-week period the subjects had undergone a behavioral as well as an attitude change. In an 18-month followup on the subjects, Mann and Janis (1968) found that the attitude and behavior changes were still significant when compared to the control group. Thirty-six percent of the subjects reported that the experiment conducted 18 months earlier had had a definite influence on their attitudes.

The degree of ego involvement may explain the results of an experiment by Nolan, Mattis and Holliday (1968). They utilized desensitization and rational behavior therapy in an attempt to induce an attitudinal change toward their subject's fear of rats and snakes. A followup a year after the treatment discovered that those patients that had expressed a fear of rats had retained the induced attitude change. Those that feared snakes had returned to their pretreatment attitudinal positions. The same treatment was given both groups, and a possible explanation of the different results would be that a fear of one thing may be more ego involving than a fear of another.

All of these studies, with the exceptions of Smith's and Rosenberg's used groups that dispersed following treatment. The identification process and the compliance process were not involved in these studies. The attitudes induced were integrated into the individual subject's value system and became a part of his ego.

There will be an attempt to create empathy for other ethnic groups in the course of the race relations training program. But the classroom situation will not permit the individual attention and physically realistic submersion in another's role that was reflected in the reviewed literature. Racial prejudice is an ego involving attitude and as such will not be easily altered by this type of training. The internalization process may have an effect on distinct individuals in the training program, but it is not expected to be widespread among the experimental groups.

Conclusions

The purpose of race relations training, as stated earlier in this paper, is to modify the behavior of individuals toward different ethnic groups. Jaques (1951, p. 311) points out, "Changes in real behavior do not take place as quickly and as easily as do changes in professed attitudes" However, the research results reviewed here have in a great number of cases indicated that while the "professed" attitude may change quickly, it does not always follow that this change will display temporal persistence.

From personal observation of members of the various branches of the DOD, the attitudes toward race relations training are basically negative and defensive. The individuals realize that racial tensions do exist, and that a race relations training program is necessary, but resent the required attendance and the "establishment" attempting to modify their personal views. Most of the DOD employees have a basic idea of the purpose of the race relations training program. Kiesler

and Kiesler (1964, p. 549) in a study of the effects of forewarning on a persuasive communication have found, "Warning the subject about the intent of a communication has the effect of nullifying the persuasive influence of the communication."

If one views the race relations training program in light of Kelman's (1958) three process theory, they would find that the selection of subjects from different organic units scattered physically around the installation, would in all probability eliminate the identification process. The compliance process would have a minimal effect as surveillance is for all intents and purposes removed on completion of training. The DOD does have equal opportunity and treatment offices that provide surveillance to guard against overt prejudice, but they will have little effect on a person's personal attitudes. Only the ego involving internalization process is left to act on the ethnic attitudes of the subjects. If an attitude change is induced it should prove to be persistent, but ego involving attitudes are not as easily manipulated, as are those that do not contain a large amount of ego involvement (Sherif et al. 1965).

Ethnic prejudice is the attitude that the race relations training program is attempting to change. Katz (1971, p. 57) writing on the formation of prejudicial attitudes says:

When we cannot admit to ourselves that we have deep feelings of inferiority we may project those feelings onto some convenient minority group and bolster our ego by attitudes of superiority toward this underprivileged group . . . the attitude is not created by the target but by the individual's emotional conflicts.

Malec (1971, p. 39), defines the functions of prejudice as, ". . . an ego-defensive mechanism (via repression, projection, displacement and consequent rationalized aggression) that enables the individual to deal with his particular psychosocial environment." Prejudice then implies high ego involvement, and "high ego involvement on a stand results in resistance to change toward a communication on the issue" (Sherif et al. 1965, p. 184). Race relations training as now conducted by the DOD does not, in the author's opinion, have the persuasive force to move McGuire's loose-linked anchors, or to bring about the internalization of a change in the subject's ego defensive attitudes.

CHAPTER 3

METHODOLOGY

A race relations training course was the manipulative device used in this study to induce an attitudinal change. This training program has no set format, and is based on the "encounter group" method of training. The course itself is 20 hours in duration, and is given for four hours each morning five days a week. Motion pictures may or may not be used in the course depending on the class situation as perceived by the instructors. An example of the types of films used is provided by "The Eye of the Storm," which is designed to show the effects of prejudice on both majority and minority groups. When the manager of the race relations training program was asked to describe how the course was conducted, he answered that the instructors had "a bag of tricks" that they used depending on how a particular class was responding to the material. The instructors acquired this "bag of tricks" through attending an eight-week instructor's course at the Defense Race Relations Institute.

Basically the attempt is to educate the different ethnic groups on the culture and mores of others. In order to show how little they know about the culture of minority groups, a "chitterling test" is administered to all of the classes. This test was designed using minority terms and asks questions about the heroes of different minority

groups. Classes are taught by a majority (white) and a minority (non-white) instructor, ideally consisting of an officer and an enlisted person of opposite sexes in a team teaching approach. Understanding, tolerance of other ethnic groups and an idea of why other ethnic groups may act as they do are taught in an attempt to change the behavioral patterns of the ethnic groups toward each other.

Subjects and Design

The subjects were military and civilian supervisory employees of a DOD agency assigned to an installation in the south-western portion of the United States. The majority of the subjects were male military members, but several were female civilians or military members. Both officers and enlisted personnel were contained in the sample, along with persons of diverse ethnic backgrounds. All of the subjects had attended the installation's race relations training program within a nine-week period of answering the questionnaire.

Classes normally consisted of approximately 20 persons, and two or more classes were usually conducted simultaneously. In order to ensure randomization for this study, and to eliminate the effects of any one instructor, the classes were combined for purposes of randomly selecting the subject sample. The combined classes ranged in size from a minimum of 34 to a maximum of 40 persons. Originally a sample size of 20 was selected from each combined class to form five distinct time groups. However, during the course of the study this sample size had to be reduced (Appendix A).

Randomization of the subjects is necessary in order to utilize the posttest only control group design (Campbell and Stanley 1963), which was felt to be optimal in terms of time and money, in this study. Equality of the experimental and control groups prior to manipulation is obtained through the randomization process. The only test administered to ascertain the effect of the experimental manipulation is the posttest which is given to both groups. The difference in scores of the two groups may then be attributed to the manipulative device used. This design eliminates any test interaction that may have occurred if a pretest type research design had been used. As Campbell and Stanley (1963, p. 18) point out concerning pretests and attitude change studies, "Especially in attitude change studies, where the attitude tests themselves introduce considerable amounts of unusual content . . . , it is quite likely that the person's attitudes and his susceptibility to persuasion are changed by a pretest." Another consideration was the distance of the research site from the university, and the costs involved in commuting. Using this design it would be possible to gather data on classes which had already undergone the race relations training in prior periods in one trip.

The data gathered on the subjects in this study were obtained for all groups with the exception of the control group, after they had in fact undergone the manipulative process. In order to determine the randomness of the selection of persons the author interviewed those individuals at different division levels making the selections. In no case were individuals selected because of perceived ethnic prejudices.

The prevailing method of selection depends on forecast workloads of the different sections in the various divisions. Once the section had been identified that could most easily give up an individual, those individuals that had not as yet attended the course were considered along with the individual's forecasted workload for the period in question. This is in line with the author's experience within the Air Force and required training. When levied with a requirement to provide a man for training, the individual designated is normally the one that will least affect the operation of a particular section. All military personnel and supervisory civilians are required to attend once a year, and the selection process will eventually reach all of them.

One constraint that may enter the randomization process is the fact that the race relations training office requested students on a majority or minority basis. That is, a division would be levied to furnish either a majority or minority member to a given race relations class. This would constrain the degree of randomization by the division that would have prevailed otherwise. However, as all personnel are required to attend at least once a year and the subjects were randomized across race relations classes, it is felt that this constraint will not materially affect the outcome of this study.

The posttest only control group design with a time variable was selected for this study. The constraint on randomization of subjects mentioned above, it may be argued, has converted it to the weaker static group comparison design (Campbell and Stanley 1963). The static group comparison design is essentially the same as the posttest only control

group design. The difference between the two designs lies in the randomization process. The static group comparison design does not require rigid randomization. As mentioned above, the author is making the assumption that the randomization process was adequate; however, it is true that there is "no formal means of certifying that the groups would have been equivalent had it not been for the X (that is, training)" (Campbell and Stanley 1963, p. 12).

The control group consisted of persons that were preparing to undergo the race relations training. This group had been selected for the training by the same process as the experimental groups. All subjects had had some degree of race relations training in the past, either the required course, or an indoctrination lecture at some point in their career. Those individuals within the control group were being selected for their annual training, and so should not have had a race relations course in the recent past. The experimental groups were selected on the basis of the amount of time that had passed between the completion of the training program and administration of the questionnaire. Groups were selected from among the various classes at the two, four, six and eight week periods. The administration of the questionnaire to the subjects took one week, and consequently the time periods involved will vary by one week, i.e., eight/nine, six/seven weeks, etc. The questionnaire that was selected to measure the attitudes of all subjects was the semantic differential.

The Measuring Instrument

A semantic differential questionnaire (Appendix B) heavily loaded using evaluative factors (Osgood, Suci and Tannenbaum 1957) was used as the test instrument. This questionnaire uses bipolar sets of adjective pairs in conjunction with a stimulus word or phrase to determine the direction and intensity of the subjects' attitudes toward the particular word or phrase. Previously, attitudes were defined as a predisposition to react in either a favorable or unfavorable manner. The semantic differential test is based on the idea that the direction of a point on the differential scale will correspond to the reaction elicited by the stimulus, and the distance from the neutral position, the intensity of the reaction. There is not "a" semantic differential test with a specific set of items and a standard score, but ". . . it is a very general way of getting at a certain type of information, a highly generalizable technique of measurement which must be adapted to the research problem to which it is applied" (Osgood et al. 1957, p. 76).

The semantic differential as a test instrument was evaluated by Osgood et al. (1957, pp. 125-195) on the basis of five years of evidence. They found that the test was completely objective, as the means for arriving at results is merely the collection of a series of checkmarks. The interpretation of the results of these marks may differ but the actual results of the questionnaire will not be affected by the biases of the observer. The reliability of the evaluation factor of the semantic differential as a measurement of attitudes produced test-retest results, after a six-week delay, that had coefficients ranging

from .87 to .93, with a mean of .91. The validity of the evaluative factor as an attitude measuring device was determined by comparing the results of semantic differential to the Thurstone and Guttman scales. When compared to the Thurstone scale the validity coefficient was .9 or better indicating that the semantic differential was measuring to a high degree the same things as the Thurstone scale. The validity coefficient between the semantic differential and the Guttman scales was not as high (.78), but indicated that to a considerable degree both tests were measuring the same things. In addition to the above attributes the semantic differential is inexpensive, and requires little time to take and administer.

The stimulus words or phrases to be used in constructing the test instrument are dependent on what is being measured. Osgood et al. (1957) indicate that normally "good judgment" with respect to the research problem is used in selecting the stimulus words or phrases. In the use of "good judgment" they recommend attempting to select stimulus words that will reflect a large degree of individual differences, that have a single unitary meaning and are familiar to all of the subjects. This study is seeking to determine the attitudes of various employees of an agency of the DOD toward ethnic groups, and therefore the stimulus words chosen have been used in the training course, and in the author's "good judgment" meet the recommendations of Osgood et al. (1957).

The bipolar adjective pairs that are to be used in conjunction with the stimulus word or phrase were taken from those pairs found to

contain high evaluative loading by Osgood et al. (1957). Their research indicates, "It seems reasonable to identify attitude, as it is ordinarily conceived in both lay and scientific language, with the evaluative dimension of the total semantic space . . ." (Osgood et al. 1957, p. 190). Relevance to the stimulus word or phrase and the degree of loading on the evaluative factors are considerations in the choice of adjective pairs selected. For this study the adjective pair will be "Americanized" versions of those used by Verma and MacDonald (1971). Instead of generous/mean, for example, generous/stingy will be used.

Twelve sets of adjective pairs common to all ten of the stimulus words or phrases will be selected in random order for each stimulus word or phrase. The ten stimulus words or phrases will be randomly placed within the test booklet (see Appendix B). The randomly selected adjective pairs will be presented in a manner that will place the favorable adjective on the right side of the page about 50 percent of the time and on the left the other 50 percent in order to reduce the effect of position preference. The adjective pairs will be separated by a scale divided into seven spaces. Seven step scales were used because Osgood et al. (1957, p. 85) ". . . found that with seven alternatives all of them tend to be used with roughly, if not exactly equal frequencies." Within each adjective pair the unfavorable extreme will be assigned the number one and the favorable extreme the number seven. Thus, for a single stimulus word or phrase 12 ($1 \times 12 = 12$) would be the unfavorable extreme, and 84 ($7 \times 12 = 84$) the favorable extreme, with 48 indicating a neutral position.

Of the ten stimulus words used in this questionnaire, five will be used to distract from the purpose of the questionnaire. The other five--"American Indian," "Asian American," "Whites," "Blacks," and "Latino's"--will be used in the determination of ethnic attitudes. Across the five ethnic concepts, the higher the score the less the prejudice, with a score of 240 being neutral.

The concepts of "Friend" and "Enemy" will be used to determine the desirability of the bipolar adjective pairs that may be ambiguous, such as calm/exciting. A study by Morland and Williams (1969) found that "Friend" was rated most positively, and "Enemy" least positively for every subject grouping studied. They also concluded that the semantic differential is superior to the Thurstone and Likert types of attitude questionnaires in cross-cultural studies.

The questionnaire was pretested among several military members, both officers and enlisted, for purposes of ascertaining the time required for completion, and to determine what type of questions might be raised concerning the questionnaire. The average time of completion turned out to be about 15 minutes. The most common question asked in the pretest and during the study was what was meant by the term "Enemy." The subjects were told that their personal concept of this term, as described by the adjective pairs was what the study was attempting to discover.

Procedures

Records of the race relations training office were used to determine the identity and work divisions of the subjects. Classes were

combined for each time period and subjects chosen using a random number table from the combined classes. The subjects were then grouped regardless of their particular time group by divisional unit. These units were contacted to determine the specific work locations of the individual subjects. Using this information subjects were contacted and administered the questionnaire. Working locations were scattered over the entire installation and subjects were contacted based on their proximity to each other and not by divisional unit. In many cases the subjects were not in and it was necessary to make repeated visits or contact them in their homes after working hours. All subjects were contacted individually with the exception of those in the control and immediate time groups. Administration of the questionnaires was scheduled to take one week resulting in a maximum of a nine-week delay between completion of the race relations training and questionnaire administration.

The study was represented to the subjects as an attempt by the "Semantics Department" at The University of Arizona to determine the meanings of various words. They were told that their agency had been chosen for this study because of the diverse cultural and geographic backgrounds of its employees. When the subjects asked how they had been picked, they were told that they had been randomly selected from the personnel files. All subjects approached agreed to participate in the study, a few on completing the questionnaire related it to the race relations training program. This method of presenting the questionnaire was used because of the pressure that the DOD is exerting on all of its agencies in the area of race relations. An example of this are the

effectiveness reports on supervisory military personnel in the Air Force, requiring a statement to the effect that the individual supports and promotes equal opportunity for all. If this statement is in a negative vein the individual being reported on may just as well forget any hopes he had toward promotion. The author felt that in order to get a true representation of the subjects' attitudes, even though anonymity had been promised all subjects, that the "Semantics Department" approach and the desire to obtain meanings of words would elicit a better response.

It was originally planned to contact about 20 individuals from the various time groups per day, and to administer the test to the immediate group in the class at the end of the training. Due to unforeseen difficulties beyond the author's control (Appendix A) this was impossible. The samples obtained, instead of being in the 125 person range as desired, amount to only 44 persons over five time periods. Due to the small size of the sample, results should be viewed with caution, as they may or may not be representative of the effects of race relations training on ethnic attitudes.

Analysis

Parametric statistics require a number of assumptions about distributions and variances (Summers and Peters 1973, p. 230) that cannot be made in this study. Because nonparametric statistics do not require that these assumptions be made, they will be used in the analysis of the gathered data. The Kruskal-Wallis One-Way Analysis of Variance by Ranks test will be applied to the data to determine if there has been a

significant attitudinal shift within the eight/nine-week period. This test will be applied to the data on attitudes toward each ethnic group as well as to the sum of the groupings.

The Wilcoxon Rank Sum Two Sample test will be used to separately compare the five time groups with the control group. "This is one of the most powerful alternatives to the parametric t-test when the researcher wishes to avoid the t-test assumptions . . ." (Siegel 1956, p. 116). Bradley (1960) found that the Wilcoxon test was .955 as efficient as the parametric student t-test when applied to two populations with normal distributions and variances. Again attitudes toward each ethnic grouping, by time group, will be compared to the attitude of the control group as well as the sum of these groupings.

CHAPTER 4

RESULTS

The dependent variable of concern in this study was the subject's posttreatment ethnic attitude as measured over the time dimension. Table 1 and Figures 1-6 indicate the means and changes in means of attitudes toward the various ethnic groups with the passage of time. The results of the Kruskal-Wallis test as applied to the raw data (Appendix C) are presented in Table 2. The method for obtaining these results will be discussed and the attitudes toward "Latino's" used in an example (Table 3). The Wilcoxon Rank Sum test will then be applied in a comparison of the control group with the various time groups within ethnic categories (Table 4). Using attitudes toward "Latino's" again, an example of the Wilcoxon test will be demonstrated (Table 5). A discussion of the results of these tests as they apply to the dependent variable will be followed by a discussion of the implications that this study may have for management.

Kruskal-Wallis Test Results

The Kruskal-Wallis One-Way ANOVA test is a distribution free method for determining the difference in location of multiple populations (Summers and Peters 1973, p. 314). A restriction on this type of test is that each group must contain at least five observations, a condition

Table 1. Mean Attitude Scores and Number of Subjects.

| Ethnogroups | Time (in weeks) | | | | | |
|-----------------|-----------------|--------|--------|--------|--------|--------|
| | Control | 0 | 2/3 | 4/5 | 6/7 | 8/9 |
| American Indian | 50.70 | 52.07 | 53.00 | 60.57 | 59.56 | 51.43 |
| Whites | 53.35 | 50.71 | 50.28 | 49.71 | 50.44 | 46.57 |
| Asian American | 52.40 | 51.92 | 59.00 | 62.86 | 61.00 | 54.43 |
| Blacks | 47.20 | 51.72 | 50.00 | 59.29 | 48.44 | 45.71 |
| Latino's | 51.80 | 53.57 | 48.29 | 63.43 | 59.00 | 53.00 |
| Over-all | 255.45 | 259.99 | 260.57 | 295.86 | 278.44 | 251.14 |
| Subjects | 20 | 14 | 7 | 7 | 9 | 7 |

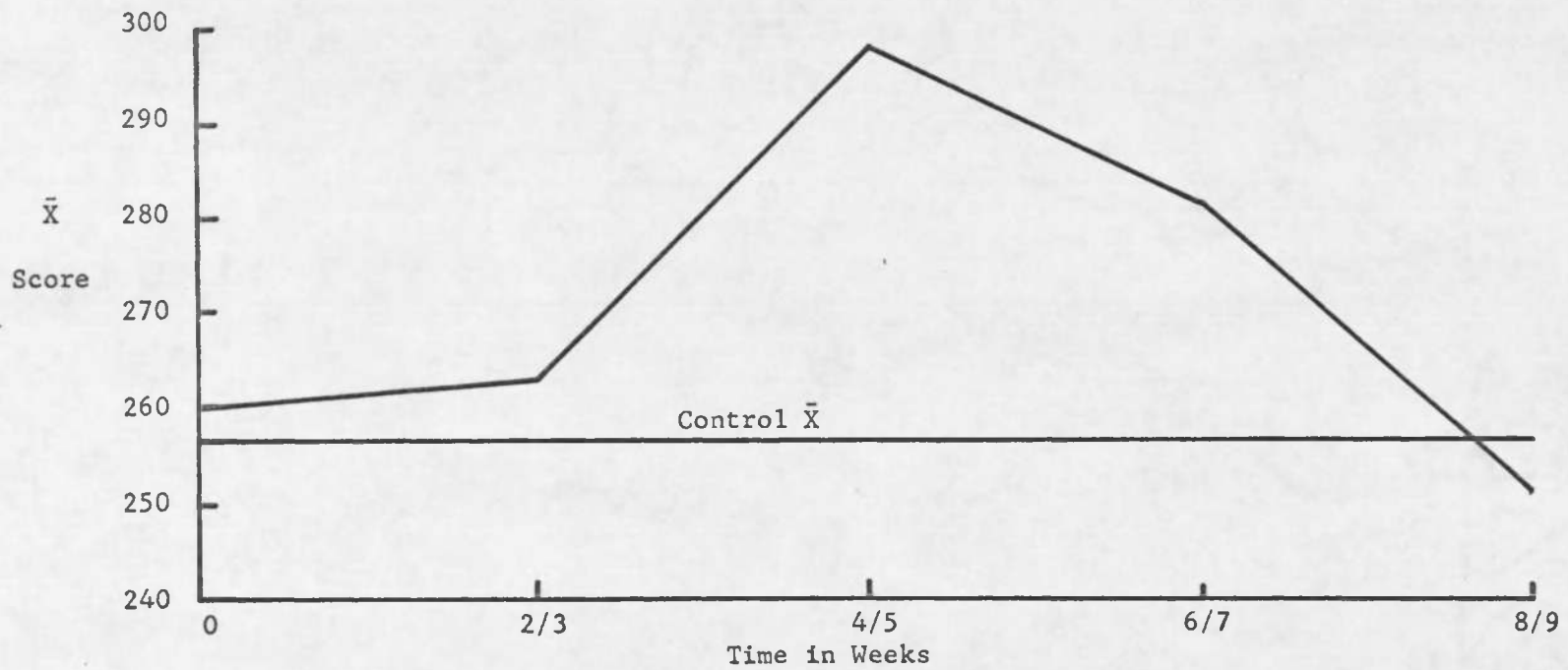


Figure 1. Over-all Ethnic Attitudes.

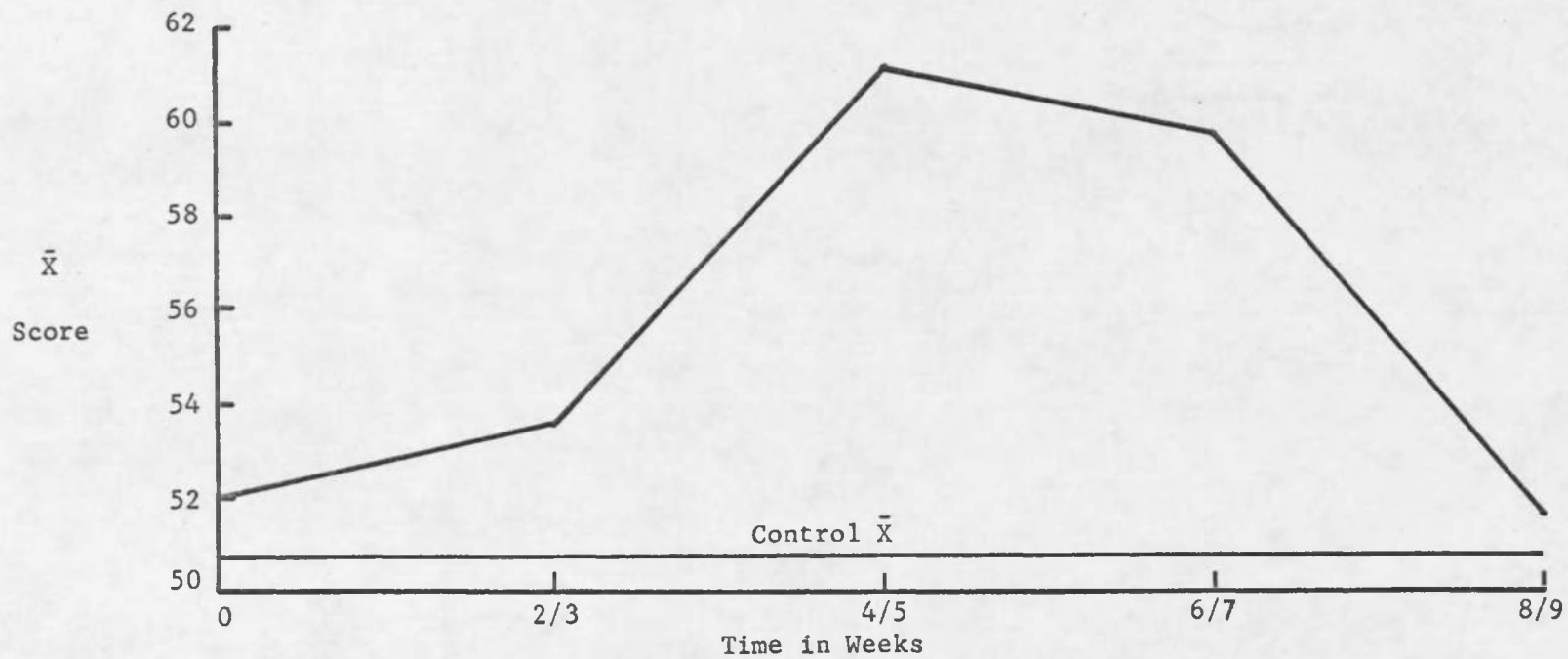


Figure 2. Attitudes Toward American Indians.

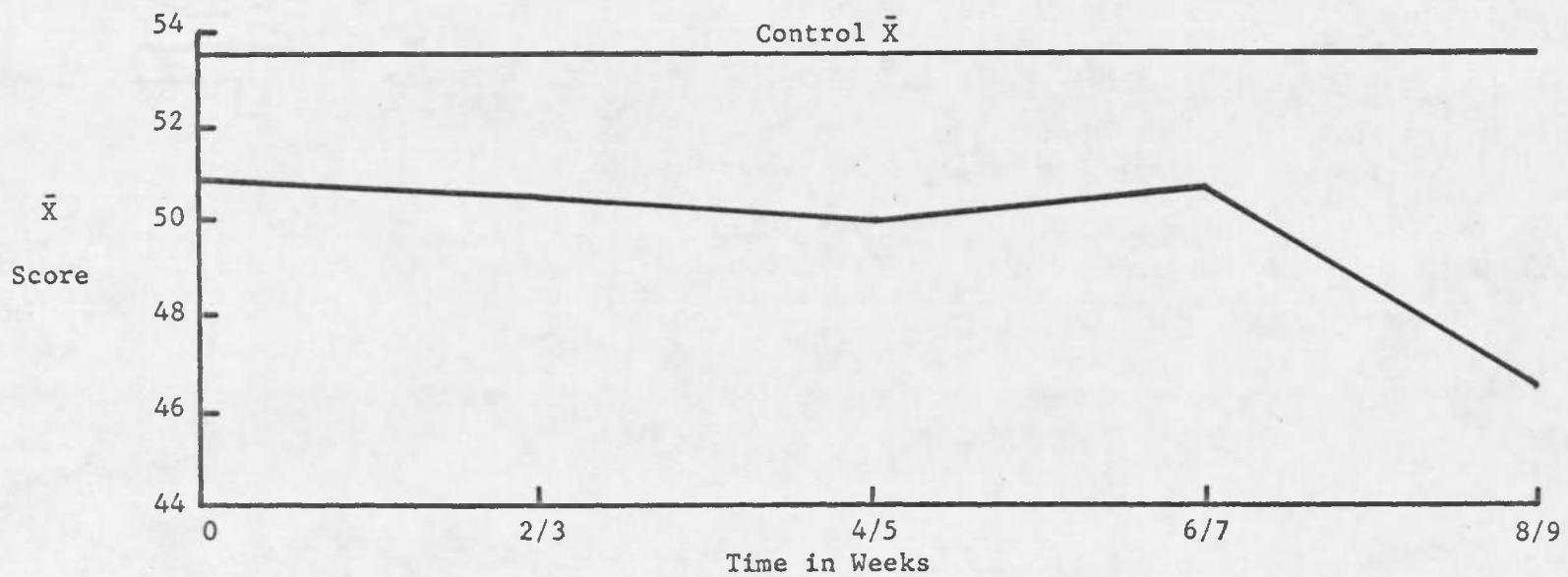


Figure 3. Attitudes Toward Whites.

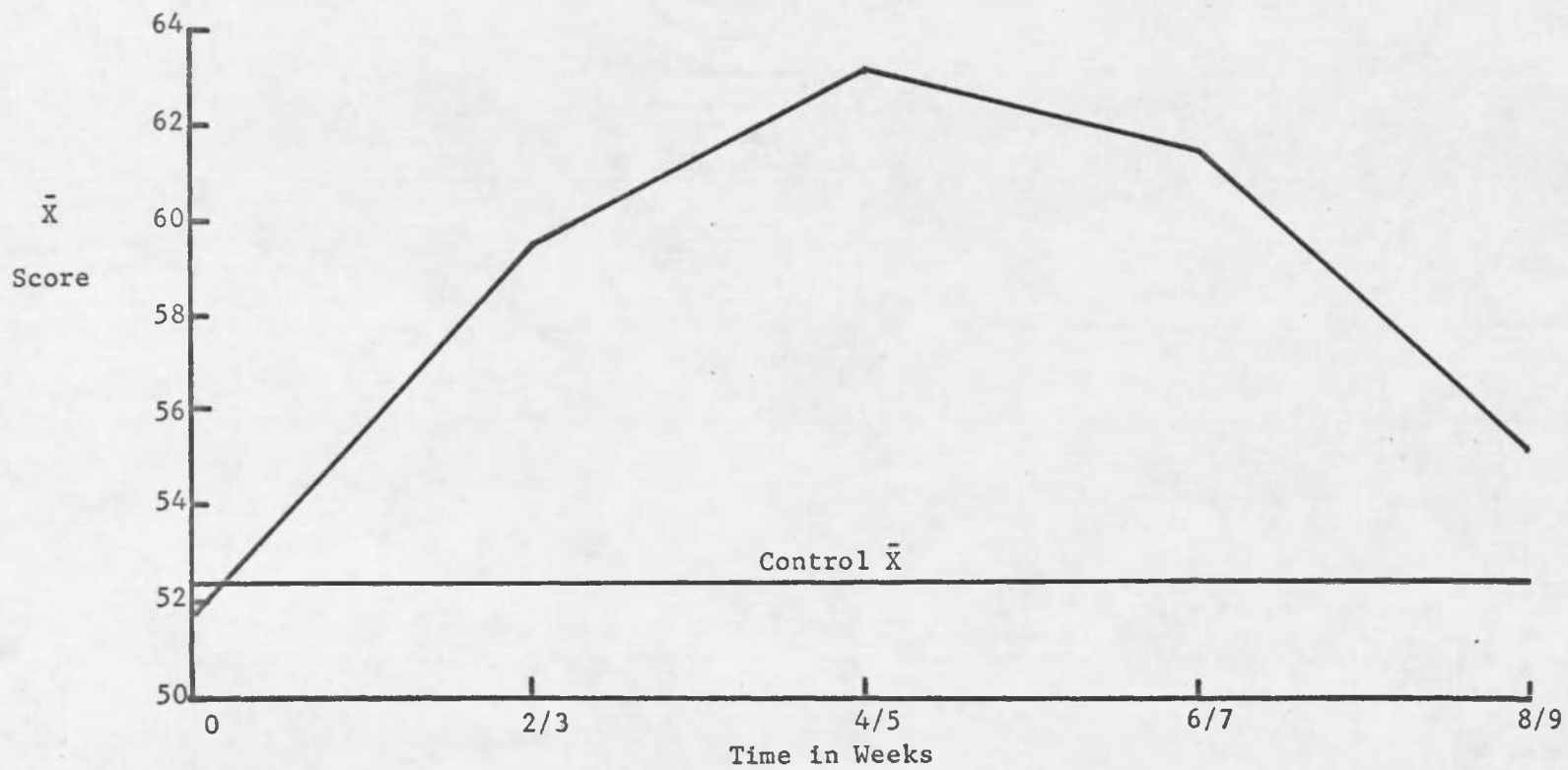


Figure 4. Attitudes Toward Asian Americans.

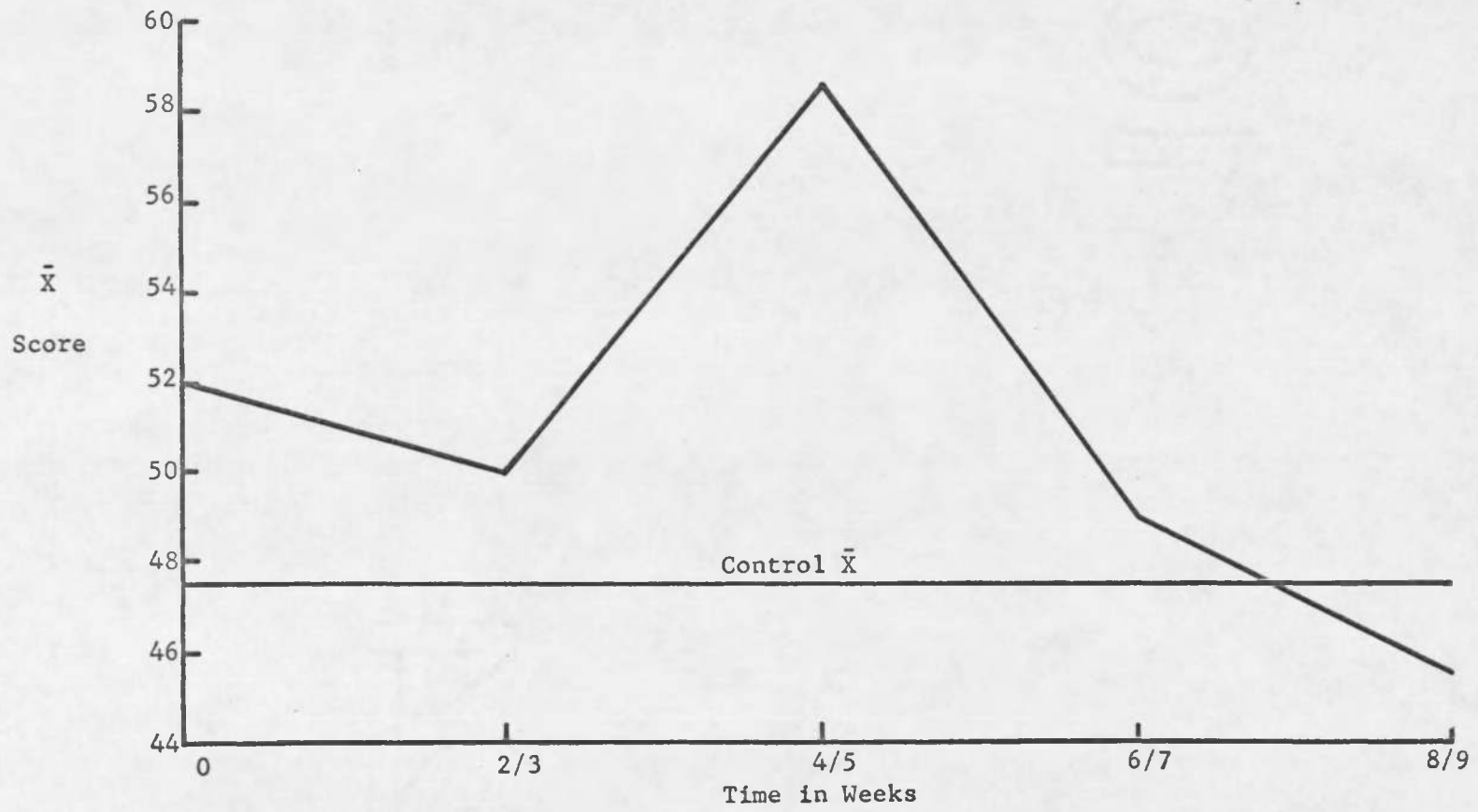


Figure 5. Attitudes Toward Blacks.

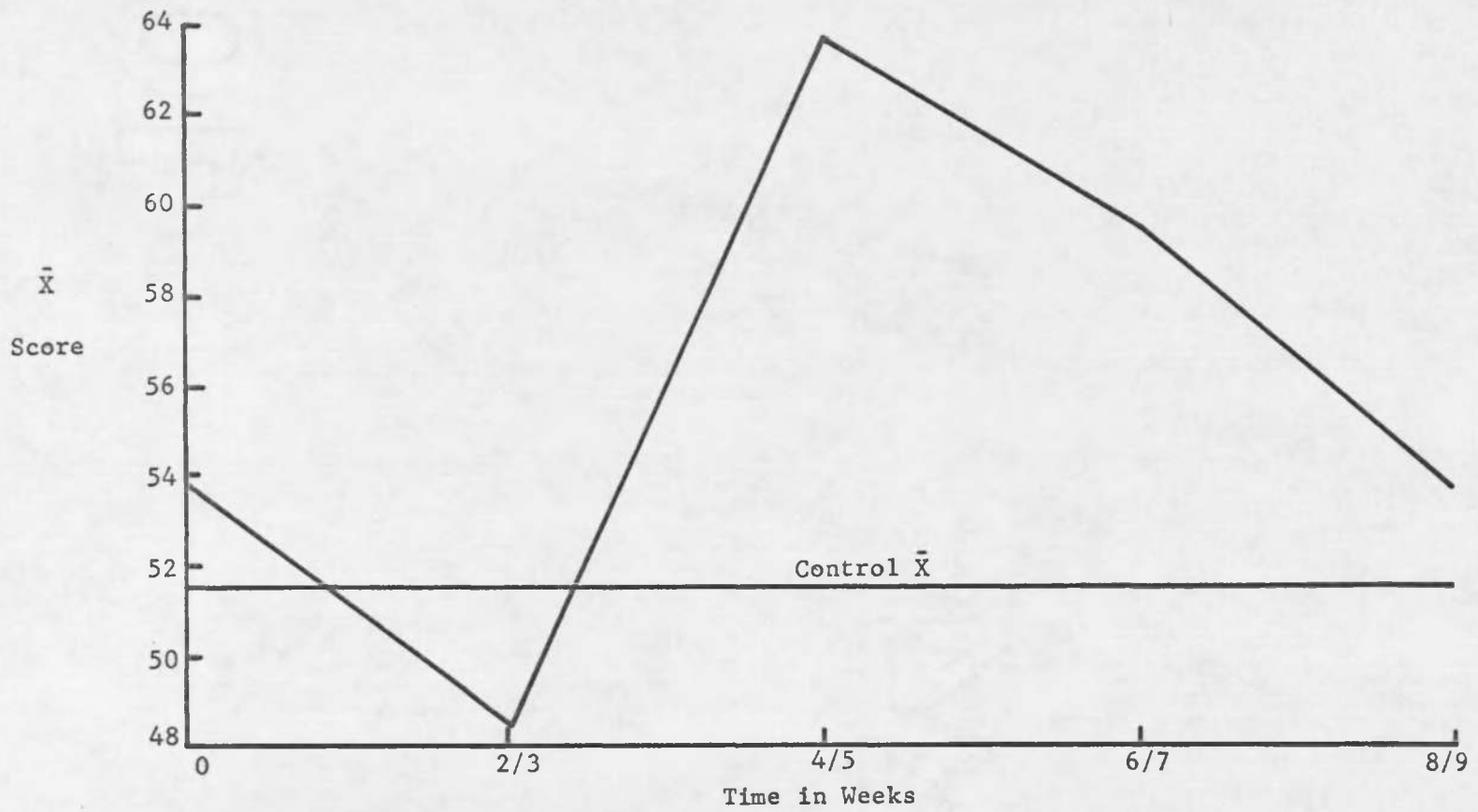


Figure 6. Attitudes Toward Latino's.

Table 2. Kruskal-Wallis One-Way ANOVA Test Results.

| Attitudes Toward | H Score | P |
|------------------|---------|-----|
| American Indians | 9.73 | .10 |
| Asian Americans | 11.42 | .05 |
| Whites | .813 | .99 |
| Blacks | 9.40 | .10 |
| Latino's | 12.01 | .05 |
| Over-all | 9.721 | .10 |

Table 3. Composite Score Ranks of Sixty-four Individuals' Attitudes Toward "Latino's."

| | Groups | | | | | |
|-----------------------|---------|---------|-----------|-----------|-----------|-----------|
| | Control | 0 weeks | 2/3 weeks | 4/5 weeks | 6/7 weeks | 8/9 weeks |
| | 1 | 2 | 8 | 32 | 5.5 | 3 |
| | 5.5 | 4 | 9 | 41.5 | 16.5 | 7 |
| | 16.5 | 16.5 | 10 | 49.5 | 32 | 26.5 |
| | 16.5 | 16.5 | 16.5 | 49.5 | 36.5 | 34.5 |
| | 16.5 | 23.5 | 23.5 | 57 | 41.5 | 39 |
| | 16.5 | 26.5 | 29.5 | 58.5 | 46.5 | 51.5 |
| | 16.5 | 29.5 | 41.5 | 61 | 55.5 | 58.5 |
| | 16.5 | 32 | | | 61 | |
| | 16.5 | 41.5 | | | 64 | |
| | 16.5 | 44.5 | | | | |
| | 26.5 | 51.5 | | | | |
| | 26.5 | 53 | | | | |
| | 34.5 | 55.5 | | | | |
| | 36.5 | 61 | | | | |
| | 38 | | | | | |
| | 44.5 | | | | | |
| | 46.5 | | | | | |
| | 48 | | | | | |
| | 54 | | | | | |
| | 63 | | | | | |
| SUM | 556.5 | 457.5 | 138 | 349 | 359 | 220 |
| (SUM) ² | 309692 | 209306 | 19044 | 121801 | 128881 | 48400 |
| n _j | 20 | 14 | 7 | 7 | 9 | 7 |
| $\frac{(SUM)^2}{n_j}$ | 15485 | 14950 | 2721 | 17400 | 14320 | 6914 |

Table 4. Wilcoxon Rank Sum Comparison; Control and Indicated Groups.

| Time | Attitudes Toward | W Score | P |
|----------------|------------------|---------|-----|
| 2/3 weeks (7)* | Asian Americans | 61 | .05 |
| 4/5 weeks (7)* | American Indians | 62 | .05 |
| | Asian Americans | 48 | .01 |
| | Blacks | 59 | .05 |
| | Latino's | 48 | .01 |
| | Over-all | 54 | .02 |
| 6/7 weeks (9)* | American Indians | 93 | .01 |

* Indicates number of subjects in time group.

Table 5. Rank Sum Computations for Attitudes Toward Latino's; Indicated Time Groups and Control (Control Group Not Shown).

| | Group | | | | |
|---------|------------|--------------|--------------|--------------|--------------|
| | 0 weeks | 2/3 weeks | 4/5 weeks | 6/7 weeks | 8/9 weeks |
| | 2 | 6 | 2 | 1 | 2 |
| | 3 | 10 | 3 | 3 | 4 |
| | 5 | 13 | 4 | 4 | 8 |
| | 6 | 22 | 6 | 8 | 12 |
| | 10 | 23 | 7 | 10 | 15 |
| | 11 | 24 | 11 | 13 | 24 |
| | 15 | 25 | 15 | 15 | 26 |
| | 16 | | | 26 | |
| | 19 | | | 28 | |
| | 20 | | | | |
| | 29 | | | | |
| | 30 | | | | |
| | 32 | | | | |
| | 33 | | | | |
| W Score | 231 | 123 | 48 | 108 | 91 |

that has been met in this study. Each subject's test score must be ranked ordinally starting with the lowest score (1) and continuing through the highest (64 in this case). Each subject's ranking score continues to retain its identity within its respective time group (see Table 3). The test statistic H is defined by the expression:

$$H = \frac{12}{n(n+1)} \left(\sum \frac{T_j^2}{n_j} \right) - 3(n+1)$$

For the example in Table 3 this results in

$$H = .0028836(71790) - 195$$

$$H = 12.01.$$

The chi-square tables are used with this value of H and five degrees of freedom to determine the level of significance, in this case .05. This test assumes that ties between scores cannot occur, but an examination of Table 3 and Appendix C indicates that, in fact, they do. Ties between test scores were assigned their average ordinal values. There is a method to adjust the H value for ties, but the unadjusted H value results in a more conservative estimate of the significance level (Siegel 1956), and is the value that will be used in this study.

The results of the application of the Kruskal-Wallis test, as indicated in Table 2, show that over the eight/nine-week period there was a change in ethnic attitudes significant at the 0.10 level or less. The change in attitudes toward all ethnic groups with the exception of "Whites" were significant at this level at least. Attitudes toward "Whites" did not change significantly over the period of this study.

Wilcoxon Rank Sum Two Sample Test Results

The Wilcoxon Rank Sum test is similar to the Kruskal-Wallis test except that only two populations at a time are compared. The results of these tests are shown in Table 4 and an example of the ranking order indicated for attitudes toward "Latino's" is displayed in Table 5. The control group rankings, with which each time group was compared, are not indicated in Table 5 as they varied with each time group tested. The data used in the construction of Table 5 may be found in Appendix C.

Two populations at a time are examined. In this study each of the time groups was compared individually with the control group. Ranking of the subject's test scores under the Wilcoxon test is exactly the opposite from the Kruskal-Wallis method. The highest test score is given the number one and the lowest test the highest ordinal number that represents the number of members in the combined populations. For example in Table 5, the 6/7-week group contained the highest test score (1) and the control group the second highest test score (2), etc. The sum of the rankings of the group with the least number of members is then compared with the Wilcoxon Rank Sum Test Tables to determine the significance level. Once again, ties theoretically do not occur. In cases of ties the higher ranking was assigned to the smaller group in order to keep the significance levels conservative. A series of student t-tests was run on the results of the Wilcoxon Rank Sum tests as indicated in Table 4 with similar results. However, the assumptions justifying the t-test were not verified and will not be discussed further.

There was a positive over-all attitude change immediately following the race relations training that was not statistically significant. Attitudes toward two of the ethnic groups experienced a small negative change (Figures 3 and 4). The group that had undergone training 2/3 weeks prior to the attitude measurement indicated a positive attitude change toward "Asian Americans" ($p = .05$). Attitudes toward "Blacks" and "Latino's" (Figures 5 and 6) suffered a backlash at this time that was not statistically significant. Attitudes toward all other ethnic groups and the over-all ethnic attitude increased slightly. "Whites" is an exception to the above statement, as the attitudes toward them declined at the first of the study and were never to reach their pre-manipulative levels again.

With the exception of the attitudes toward "Whites," all attitudes toward specific ethnic groups and the over-all ethnic attitude displayed significant positive attitude change at the 4/5-week point in time. Attitudes toward "Asian Americans" and "Latino's" were significant at the .01 level, and the over-all ethnic attitude change was significant at the .02 level. Attitudes toward "Blacks" and "American Indians" were significant at .05. In the two weeks that followed, the induced attitude changes decayed to the extent that only the attitude toward "American Indians," was significant ($p = .10$). The 8/9-week group displayed decay of the ethnic attitudes toward "American Indians," "Asian Americans" and "Latino's" that was almost total. The over-all ethnic attitude and the attitude toward "Blacks" had joined "Whites" below the levels of the control group. This total over-all decay at the 8/9-week period in time supports the hypothesis of this paper.

Because of the fact that the sample utilized was a convenience sample and the author had no control over selection of subjects, and assumed that the sample was random and non-biased, it is possible to argue that the indicated results may not be reliable. In addition to this weakness, is the small sample size obtained (see Appendix A). Approximately 20 percent of the students participating in each race relations training class were used in this study. These weaknesses should be considered in viewing the results and drawing conclusions from this study.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

Earlier in this paper it was argued that a sleeper effect would probably not emerge due to a lack of conditions conducive to Kelman's (1958) identification process. This position was supported by the views of Peterson and Thurstone (1933) and Festinger (1955) that the sleeper effect was caused by the interaction of the subjects between the time of manipulation and the time of measurement. As has been pointed out, the subjects in this study did not exist in a close environment, and the amount of interaction between subjects following the training would be practically nil. Nevertheless a sleeper affect emerged. The heterogeneity of the subjects and lack of an opportunity to interact after the training, suggests that in this instance the sleeper effect was caused by something other than interaction or identification. Kelman's (1958) internalization process might be suggested as a reason for the significant change displayed by the 4/5-week group. But this group received the same training as that experienced by the other groups, from the same instructors, and the other groups display decay subsequent to this time period. It may be suggested that because the classes had no set format that the instructor in the 4/5-week time group had an exceptionally good class. If this were true both classes would have had to have been exceptionally good at the same time, as the two classes were combined

for subject selection. Another explanation for the difference in this time group might be found in that the small sample size obtained was not representative. If one assumes that the attitudinal change pattern as a result of race relations training over time is essentially the same as the pattern displayed by these experimental groups, the internalization process must be ruled out, as this pattern does not display the permanence inherent in the internalization process.

The fact that the experimental groups did not indicate an immediate attitude change does not support Kelman's (1958) compliance process. However it does tend to support the studies of Hovland et al. (1949), Hovland and Weiss (1951) and Stotland et al. (1959). They had theorized that the sleeper effect was caused by initial resistance to the manipulating message, which the subjects viewed as propagandistic. Over time the source of the message is forgotten, but the attitudinal effects of the message are retained. The results of this study tend to follow this pattern. Initially, attitude changes toward all ethnic groups are not significant, and in two cases have declined. After a period of 4/5 weeks however the ethnic attitudes toward all groups, with the exception of "Whites" have undergone a significant change. This change then appears to decay over the next four weeks, in an over-all decay curve that declines monotonically, which is similar to the findings on decay by Watts and McGuire (1964).

The decline in ethnic attitudes toward "Whites" is probably caused by the focus of the race relations training on minority ethnic groups. In the histories of all of these groups there has been a period

of exploitation by the group known as "Whites." This may have caused guilt feelings among the majority members, as well as reinforcing the views that they have been exploited by minority members. The fact that the "Whites" are the majority group and do not display the cohesiveness or defensiveness of the minority groups may also have had an impact on the results of this study. There is no "white power" concept with the inherent polarization of all that is white is good.

Implications for Management

In the selection of a field site for this study several different industrial organizations were approached as to the feasibility of conducting it with them. All of the organizations contacted had human relations programs either planned or in existence. Because of the time element involved it was impossible to make use of any of these sites. However, only one of the organizations contacted indicated that they were attempting to evaluate the effectiveness of their training programs. Efficiency and effectiveness are yardsticks by which managers are evaluated, and yet the training programs designed to help the individual manager achieve these goals are apparently not generally measured. And if they are measured, the emphasis is on the immediate results, not the effects of the training over a period of time. Management by objectives seemed to have been the area in which the greatest amount of training was planned. When asked if they planned to measure the effect of this training on the effectiveness of either the individual manager, or the organization as a whole, the answer was invariably "no."

On the subject of human relations training and attitudes, Scott and Mitchell (1972, pp. 283-284) have indicated:

Closely linked to the imparting of knowledge is the development of attitudes. Actually, it is more accurate to say changing the attitudes of participants. People go into training programs with certain preconceived ideas . . . The attitudes management trainees have . . . determine executive effectiveness of a leader. Experts in behavioral training feel it is not sufficient just to impart knowledge in these fields. It is also necessary to work on changing attitudes on human behavior. Thus, the training aspect of attitude development is an important part of programs. It is, however, one of the most difficult to execute effectively.

This study attempted to look at one human relations training program and its effectiveness in inducing a persistent attitudinal change. The use of highly ego involving ethnic attitudes may not have general application to the usual behavioral training program. But, for the DOD and other organizations that may attempt to change ego involving attitudes, whether explicitly or implicitly, it may have some validity.

The specific results of this study may not apply to any other training program. But, the need to attempt some sort of an evaluation of the effects of organizational training programs over time should be apparent. In contrast to the two DOD studies previously mentioned in the area of race relations training, this study did not find that attitudes were affected, except for a fairly short period of time. If further research in this area determines that the effects of race relations training are in fact of a short term nature, the question then arises, "Are the results worth the cost?" Perhaps an attempt to find a course of instruction that will result in longer term attitudinal changes should be sought.

In spite of the fact that this study did not support Kelman's (1958) theory of attitude change, the author believes that the identification process may be valid. The commander of the field site installation was approached with the idea of using work groups as classes and comparing the results with the usual method of selecting class participants, but he declined to do so. Another method, that is now being used by the Air Force, is a heavy indoctrination in race relations during the transition period between civilian and military life. The individual is in a totally new and different environment, undergoing changes, and the theory is that he will be receptive to the race relations message during this unstable period in his life style and perceived values. Studies in the two areas mentioned above may prove valuable in determining a method for inducing long term attitudinal changes.

In answer to the "so what?" question, it can only be stated that with this organization, with this race relations training staff and with these particular subjects, the race relations training program is not having a permanent effect on the ethnic attitudes of the participants. Based on the author's experience, he believes that this is the general result of the majority of the race relations training programs as they now exist. On the other hand, he did not expect a sleeper effect to emerge either.

To be fair to the race relations training programs, it is necessary to say that the express purpose of these programs is to modify behavior and not attitudes. As the commander of the research installation indicated, we may not be changing attitudes but the behavior patterns of the individuals have been changed by this training.

APPENDIX A

RESEARCH DIFFICULTIES

In accordance with the regulations of one government agency, the author made a request to conduct his survey "a minimum of eight weeks" prior to the targeted start date. Several telephone calls were received from various levels of the agency's management indicating initially that the study was redundant, as a study on the same subject had just been completed. It was pointed out that this study was in fact different, in that the other studies had not taken the time variable into consideration. It was finally agreed that this study was different and forwarded on through the approval channels. A telephone call was then received from the agency headquarters in Washington, D.C., indicating that the agency was going to conduct a similar agency-wide survey, and that the two field sites selected by the author had appeared in their random sample for their study. Further, it was stated, that they did not want the author to "muddy up the waters" prior to their study. A verbal offer was made at that time to make available a field site in the state of Alabama. This offer had to be declined. In the meantime the agency headquarters had decided to delay the start of their training program for this fiscal year for a period of six weeks. This delay would have resulted in the author being unable to complete the degree requirements prior to departing the university. As of this writing (five months

after submission) no formal reply to the request to conduct a survey has been received.

With the aid and assistance of the author's thesis advisor, contact was made with another agency that currently had an ongoing race relations training program. The manager of the race relations training program was approached about conducting a survey; he indicated a deep interest and support for the study. However, he could not approve it. The commander of the installation, when queried, and being cognizant of the support of the race relations training section, gave his approval for the study. He expressed an interest in the outcome of the study, and requested that he be furnished a copy of the results and a guarantee of anonymity for both the subjects and the installation. Both of these conditions were agreed to.

One week had originally been planned in which to gather the data. In retrospect, it would probably have been impossible to attain the number of responses desired (100) in this time period while working alone. The posttest only research design required that individuals be personally contacted and administered the questionnaire. It was felt that the response from a mailed questionnaire would not be great enough to be representative. Subjects were widely scattered geographically over the installation and initial identification of their working sections was at the division level. The information of subject's work section as provided by the various divisions was not, in many cases, accurate. After finally locating the work section, it was often found that the subject was not available at the time, or that he was on leave,

temporary duty at another location, transferred to another location or had left the organization entirely.

For the first two days subjects were contacted and filled out the questionnaire. This did not go as rapidly as originally planned, but as familiarity with the installation increased, it was expected that the number of subjects contacted per day would increase. In one of the subject's work areas it was necessary to get the permission of the section security to enter the area in order to administer the questionnaire. The section security later queried the installation security section as to the propriety of the author's activities. The installation security section had not been informed of the author's purpose and contacted the race relations training manager to ascertain if the study was authorized, indicating that they did not believe that such a survey was authorized by the agency rules and regulations. The authorization question was brought to the attention of the installation commander, who indicated that he had given his authorization, but requested that the security section verify that his actions were in keeping with agency rules. A check of the rules found that surveys and questionnaires were legal if they did not focus on "military matters." The legal section then entered the picture and indicated that in light of the sensitive nature of the race relations programs, and the fact that the study measured the effects of a military training program, that race relations training and the results thereof were in fact "military matters." The author attempted to argue that an individual's attitudes toward another group of individuals was not a military matter, but to no avail. While

the preceding process was going on the author contacted subjects based on the sample size obtained for each time group in an effort to have the sample sizes as equal as possible.

In view of the above facts the installation commander was compelled to withdraw permission to conduct the remainder of the survey. As a consequence the sample size is necessarily quite small and may not offer a reliable indication of the effects of race relations training on the persistence of induced attitudes.

APPENDIX B

THE QUESTIONNAIRE

The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. Responses will be treated as confidential. Names of individuals will not in any way be used in the report. In taking this test, please make your judgments on the basis of what these things mean to you. On each page you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.

Here is how you are to use these scales:

If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

fair X : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

or

fair _____ : _____ : _____ : _____ : _____ : _____ : X : _____ unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extreme), you should place your check-mark as follows:

strong _____ : X : _____ : _____ : _____ : _____ : _____ : _____ weak

or

strong _____ : _____ : _____ : _____ : _____ : X : _____ : _____ weak

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active _____ : _____ : X : _____ : _____ : _____ : _____ : _____ passive

or

active _____ : _____ : _____ : _____ : X : _____ : _____ : _____ passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging.

If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space:

safe _____ : _____ : _____ : X : _____ : _____ : _____ dangerous

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries:

 THIS NOT THIS
_____ : _____ : X : _____ : _____ : _____ X _____

(2) Be sure you check every scale for every concept--do not omit any.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on this test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the test. Make each item a separate and independent judgment. Work at a fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impression, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

U. S. S. R.

Generous _____:_____:_____:_____:_____:_____:_____ Stinky

Calm _____:_____:_____:_____:_____:_____:_____ Exciting

Selfish _____:_____:_____:_____:_____:_____:_____ Unselfish

Sad _____:_____:_____:_____:_____:_____:_____ Happy

Foolish _____:_____:_____:_____:_____:_____:_____ Wise

Fair _____:_____:_____:_____:_____:_____:_____ Unfair

Cruel _____:_____:_____:_____:_____:_____:_____ Kind

Successful _____:_____:_____:_____:_____:_____:_____ Unsuccessful

Unpleasant _____:_____:_____:_____:_____:_____:_____ Pleasant

Interesting _____:_____:_____:_____:_____:_____:_____ Boring

Honest _____:_____:_____:_____:_____:_____:_____ Dishonest

Tense _____:_____:_____:_____:_____:_____:_____ Relaxed

AMERICAN INDIANS

Foolish _____:_____:_____:_____:_____:_____:_____ Wise

Unpleasant _____:_____:_____:_____:_____:_____:_____ Pleasant

Successful _____:_____:_____:_____:_____:_____:_____ Unsuccessful

Calm _____:_____:_____:_____:_____:_____:_____ Exciting

Selfish _____:_____:_____:_____:_____:_____:_____ Unselfish

Cruel _____:_____:_____:_____:_____:_____:_____ Kind

Sad _____:_____:_____:_____:_____:_____:_____ Happy

Generous _____:_____:_____:_____:_____:_____:_____ Stingy

Interesting _____:_____:_____:_____:_____:_____:_____ Boring

Tense _____:_____:_____:_____:_____:_____:_____ Relaxed

Fair _____:_____:_____:_____:_____:_____:_____ Unfair

Honest _____:_____:_____:_____:_____:_____:_____ Dishonest

WHITES

Generous _____:_____:_____:_____:_____:_____:_____ Stingy

Cruel _____:_____:_____:_____:_____:_____:_____ Kind

Foolish _____:_____:_____:_____:_____:_____:_____ Wise

Interesting _____:_____:_____:_____:_____:_____:_____ Boring

Sad _____:_____:_____:_____:_____:_____:_____ Happy

Successful _____:_____:_____:_____:_____:_____:_____ Unsuccessful

Unpleasant _____:_____:_____:_____:_____:_____:_____ Pleasant

Selfish _____:_____:_____:_____:_____:_____:_____ Unselfish

Fair _____:_____:_____:_____:_____:_____:_____ Unfair

Honest _____:_____:_____:_____:_____:_____:_____ Dishonest

Calm _____:_____:_____:_____:_____:_____:_____ Exciting

Tense _____:_____:_____:_____:_____:_____:_____ Relaxed

ENEMY

Generous _____:_____:_____:_____:_____:_____:_____ Stinky

Sad _____:_____:_____:_____:_____:_____:_____ Happy

Selfish _____:_____:_____:_____:_____:_____:_____ Unselfish

Calm _____:_____:_____:_____:_____:_____:_____ Exciting

Successful _____:_____:_____:_____:_____:_____:_____ Unsuccessful

Interesting _____:_____:_____:_____:_____:_____:_____ Boring

Foolish _____:_____:_____:_____:_____:_____:_____ Wise

Cruel _____:_____:_____:_____:_____:_____:_____ Kind

Unpleasant _____:_____:_____:_____:_____:_____:_____ Pleasant

Fair _____:_____:_____:_____:_____:_____:_____ Unfair

Honest _____:_____:_____:_____:_____:_____:_____ Dishonest

Tense _____:_____:_____:_____:_____:_____:_____ Relaxed

PEOPLE'S REPUBLIC OF CHINA

Sad _____:_____:_____:_____:_____:_____ Happy

Successful _____:_____:_____:_____:_____:_____ Unsuccessful

Selfish _____:_____:_____:_____:_____:_____ Unselfish

Generous _____:_____:_____:_____:_____:_____ Stingy

Honest _____:_____:_____:_____:_____:_____ Dishonest

Calm _____:_____:_____:_____:_____:_____ Exciting

Fair _____:_____:_____:_____:_____:_____ Unfair

Unpleasant _____:_____:_____:_____:_____:_____ Pleasant

Interesting _____:_____:_____:_____:_____:_____ Boring

Tense _____:_____:_____:_____:_____:_____ Relaxed

Cruel _____:_____:_____:_____:_____:_____ Kind

Foolish _____:_____:_____:_____:_____:_____ Wise

MYSELF

Fair _____:_____:_____:_____:_____:_____:_____ Unfair

Sad _____:_____:_____:_____:_____:_____:_____ Happy

Successful _____:_____:_____:_____:_____:_____:_____ Unsuccessful

Unpleasant _____:_____:_____:_____:_____:_____:_____ Pleasant

Calm _____:_____:_____:_____:_____:_____:_____ Exciting

Generous _____:_____:_____:_____:_____:_____:_____ Stingy

Interesting _____:_____:_____:_____:_____:_____:_____ Boring

Cruel _____:_____:_____:_____:_____:_____:_____ Kind

Tense _____:_____:_____:_____:_____:_____:_____ Relaxed

Honest _____:_____:_____:_____:_____:_____:_____ Dishonest

Foolish _____:_____:_____:_____:_____:_____:_____ Wise

Selfish _____:_____:_____:_____:_____:_____:_____ Unselfish

ASIAN AMERICANS

Sad _____:_____:_____:_____:_____:_____ Happy

Interesting _____:_____:_____:_____:_____ Boring

Generous _____:_____:_____:_____:_____ Stingy

Unpleasant _____:_____:_____:_____:_____ Pleasant

Calm _____:_____:_____:_____:_____ Exciting

Honest _____:_____:_____:_____:_____ Dishonest

Fair _____:_____:_____:_____:_____ Unfair

Tense _____:_____:_____:_____:_____ Relaxed

Selfish _____:_____:_____:_____:_____ Unselfish

Cruel _____:_____:_____:_____:_____ Kind

Successful _____:_____:_____:_____:_____ Unsuccessful

Foolish _____:_____:_____:_____:_____ Wise

FRIEND

Fair _____:_____:_____:_____:_____:_____:_____ Unfair

Sad _____:_____:_____:_____:_____:_____:_____ Happy

Successful _____:_____:_____:_____:_____:_____:_____ Unsuccessful

Interesting _____:_____:_____:_____:_____:_____:_____ Boring

Selfish _____:_____:_____:_____:_____:_____:_____ Unselfish

Calm _____:_____:_____:_____:_____:_____:_____ Exciting

Unpleasant _____:_____:_____:_____:_____:_____:_____ Pleasant

Generous _____:_____:_____:_____:_____:_____:_____ Stingy

Honest _____:_____:_____:_____:_____:_____:_____ Dishonest

Tense _____:_____:_____:_____:_____:_____:_____ Relaxed

Wise _____:_____:_____:_____:_____:_____:_____ Foolish

Cruel _____:_____:_____:_____:_____:_____:_____ Kind

BLACKS

Cruel _____:_____:_____:_____:_____ Kind
Unpleasant _____:_____:_____:_____ Pleasant
Calm _____:_____:_____:_____ Exciting
Fair _____:_____:_____:_____ Unfair
Dishonest _____:_____:_____:_____ Honest
Sad _____:_____:_____:_____ Happy
Interesting _____:_____:_____:_____ Boring
Tense _____:_____:_____:_____ Relaxed
Generous _____:_____:_____:_____ Stingy
Successful _____:_____:_____:_____ Unsuccessful
Selfish _____:_____:_____:_____ Unselfish
Foolish _____:_____:_____:_____ Wise

LATINO'S

Calm _____:_____:_____:_____:_____:_____:_____ Exciting

Tense _____:_____:_____:_____:_____:_____:_____ Relaxed

Fair _____:_____:_____:_____:_____:_____:_____ Unfair

Selfish _____:_____:_____:_____:_____:_____:_____ Unselfish

Cruel _____:_____:_____:_____:_____:_____:_____ Kind

Dishonest _____:_____:_____:_____:_____:_____:_____ Honest

Interesting _____:_____:_____:_____:_____:_____:_____ Boring

Unpleasant _____:_____:_____:_____:_____:_____:_____ Pleasant

Successful _____:_____:_____:_____:_____:_____:_____ Unsuccessful

Sad _____:_____:_____:_____:_____:_____:_____ Happy

Generous _____:_____:_____:_____:_____:_____:_____ Stingy

Foolish _____:_____:_____:_____:_____:_____:_____ Wise

APPENDIX C

QUESTIONNAIRE INFORMATION

Raw test scores on attitudes toward American Indians:

| Control | 0 wks. | 2/3 wks. | 4/5 wks. | 6/7 wks. | 8/9 wks. |
|---------|--------|----------|----------|----------|----------|
| 18 | 35 | 44 | 51 | 47 | 33 |
| 20 | 44 | 49 | 55 | 53 | 37 |
| 40 | 46 | 53 | 60 | 53 | 50 |
| 44 | 47 | 54 | 63 | 54 | 51 |
| 46 | 47 | 55 | 64 | 60 | 61 |
| 48 | 47 | 57 | 65 | 65 | 62 |
| 49 | 49 | 59 | 66 | 65 | 66 |
| 51 | 53 | | | 66 | |
| 51 | 58 | | | 73 | |
| 52 | 59 | | | | |
| 52 | 60 | | | | |
| 52 | 60 | | | | |
| 52 | 61 | | | | |
| 54 | 63 | | | | |
| 54 | | | | | |
| 56 | | | | | |
| 56 | | | | | |
| 57 | | | | | |
| 66 | | | | | |
| 68 | | | | | |
| 72 | | | | | |

Raw test scores on attitudes toward Asian Americans:

| Control | 0 wks. | 2/3 wks. | 4/5 wks. | 6/7 wks. | 8/9 wks. |
|---------|--------|----------|----------|----------|----------|
| 37 | 39 | 50 | 49 | 43 | 39 |
| 40 | 45 | 52 | 60 | 46 | 45 |
| 46 | 47 | 58 | 60 | 54 | 47 |
| 47 | 48 | 61 | 61 | 56 | 54 |
| 47 | 48 | 62 | 65 | 58 | 59 |
| 48 | 49 | 63 | 66 | 65 | 64 |
| 48 | 49 | 67 | 79 | 70 | 73 |
| 48 | 50 | | | 77 | |
| 48 | 51 | | | 80 | |
| 48 | 54 | | | | |
| 51 | 54 | | | | |
| 53 | 62 | | | | |
| 53 | 62 | | | | |
| 57 | 69 | | | | |
| 58 | | | | | |
| 58 | | | | | |
| 59 | | | | | |
| 59 | | | | | |
| 68 | | | | | |
| 75 | | | | | |

Raw test scores on attitudes toward Whites:

| Control | 0 wks. | 2/3 wks. | 4/5 wks. | 6/7 wks. | 8/9 wks. |
|---------|--------|----------|----------|----------|----------|
| 32 | 22 | 46 | 27 | 35 | 38 |
| 39 | 45 | 46 | 38 | 41 | 39 |
| 41 | 46 | 47 | 49 | 46 | 45 |
| 44 | 48 | 48 | 50 | 46 | 49 |
| 44 | 48 | 53 | 52 | 49 | 51 |
| 46 | 48 | 54 | 54 | 50 | 52 |
| 47 | 49 | 58 | 78 | 52 | 52 |
| 48 | 51 | | | 53 | |
| 49 | 53 | | | 82 | |
| 51 | 54 | | | | |
| 52 | 57 | | | | |
| 54 | 58 | | | | |
| 54 | 65 | | | | |
| 56 | 66 | | | | |
| 57 | | | | | |
| 58 | | | | | |
| 59 | | | | | |
| 68 | | | | | |
| 84 | | | | | |
| 84 | | | | | |

Raw test scores on attitudes toward Blacks:

| Control | 0 wks. | 2/3 wks. | 4/5 wks. | 6/7 wks. | 8/9 wks. |
|---------|--------|----------|----------|----------|----------|
| 12 | 24 | 45 | 52 | 20 | 37 |
| 31 | 44 | 46 | 53 | 41 | 40 |
| 36 | 44 | 48 | 55 | 46 | 41 |
| 39 | 47 | 50 | 55 | 48 | 44 |
| 39 | 48 | 52 | 57 | 48 | 50 |
| 40 | 49 | 52 | 66 | 51 | 52 |
| 40 | 52 | 57 | 77 | 54 | 56 |
| 47 | 53 | | | 56 | |
| 48 | 54 | | | 72 | |
| 48 | 54 | | | | |
| 48 | 59 | | | | |
| 51 | 61 | | | | |
| 53 | 64 | | | | |
| 53 | 71 | | | | |
| 54 | | | | | |
| 56 | | | | | |
| 57 | | | | | |
| 60 | | | | | |
| 62 | | | | | |
| 70 | | | | | |

Raw test scores on attitudes toward Latino's:

| Control | 0 wks. | 2/3 wks. | 4/5 wks. | 6/7 wks. | 8/9 wks. |
|---------|--------|----------|----------|----------|----------|
| 26 | 29 | 42 | 52 | 40 | 38 |
| 40 | 39 | 45 | 57 | 48 | 51 |
| 48 | 48 | 46 | 62 | 52 | 50 |
| 48 | 48 | 48 | 62 | 54 | 53 |
| 48 | 49 | 49 | 69 | 57 | 56 |
| 48 | 50 | 51 | 70 | 60 | 63 |
| 48 | 51 | 57 | 72 | 68 | 70 |
| 48 | 52 | | | 72 | |
| 48 | 57 | | | 80 | |
| 48 | 58 | | | | |
| 50 | 63 | | | | |
| 50 | 66 | | | | |
| 53 | 68 | | | | |
| 54 | 72 | | | | |
| 55 | | | | | |
| 58 | | | | | |
| 60 | | | | | |
| 61 | | | | | |
| 67 | | | | | |
| 78 | | | | | |

Raw test scores on over-all ethnic attitudes:

| Control | 0 wks. | 2/3 wks. | 4/5 wks. | 6/7 wks. | 8/9 wks. |
|---------|--------|----------|----------|----------|----------|
| 195 | 158 | 246 | 262 | 240 | 211 |
| 200 | 234 | 257 | 270 | 252 | 222 |
| 210 | 234 | 260 | 285 | 260 | 232 |
| 227 | 242 | 260 | 286 | 262 | 267 |
| 239 | 247 | 266 | 298 | 270 | 268 |
| 240 | 250 | 266 | 317 | 272 | 270 |
| 245 | 265 | 269 | 353 | 290 | 288 |
| 249 | 266 | | | 328 | |
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