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GRADUATE COLLEGE

ATTITUDE CHANGE AS A FUNCTION OF FIELD MEDICAL SERVICE SCHOOL

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ROBERT GORDON PISHEL, JR.

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ATTITUDE CHANGE AS A FUNCTION OF FIELD MEDICAL SERVICE SCHOOL

APPROVED BY

William R. Hood

R. E. Tillotson

John G. Brubon

John R. Morris

DISSERTATION COMMITTEE

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ATTITUDE CHANGE AS A FUNCTION OF FIELD MEDICAL SERVICE SCHOOL

CHAPTER I

INTRODUCTION AND PROBLEM

In order to become a hospital corpsman for assignment in the Fleet or to a Naval Hospital, there is a prerequisite to complete Hospital Corps Class "A" School (HCS). This school primarily provides academic training in subject matter pertaining to what a corpsman should know. Additional training is acquired by most corpsmen in Field Medical Service School (FMSS). FMSS training is oriented toward the acquisition of skills related to first aid emergency procedures. It is assumed that together both schools provide the basic skills and fundamental knowledge enabling the corpsman to perform the expected duties under conditions of his assignment.

FMSS creates a more stressful situation for the corpsman students than HCS does. Its training is preparatory for duty with the Marines. A training program such as FMSS should certainly produce an effect on corpsmen attitudes toward issues of relevance to the corpsman image and his work. Since a great many corpsmen are attending FMSS with

ultimate assignment to Marine divisions, information regarding such attitudes and how they change as a function of FMSS training should be of considerable interest to the Navy. From an academic standpoint, an attitude change study using subjects in a field training situation could provide new knowledge with respect to the psychology of attitude change.

Other Studies

Many laboratory experiments have been performed where behavioral commitment has been demonstrated to induce favorable attitudes in subjects whose initial positions were opposed to the presented communication. For example, a study by Janis and King (1954) demonstrates the effect of behavioral commitment. They asked college students either to present a speech from a prepared outline or to listen to the speech given by another student. The position to be taken in the speech disagreed with the initial position of both speaker and listener. Change-scores indicated that speech-givers changed more in the direction of the discrepant position upheld by the speech than did listeners. Also, speech-givers who showed most change were those engaged in greatest improvisation in their talks and who were most satisfied with their performances.

Cognitive dissonance theorists assume that the magnitude of dissonance is a direct function of the proportion of dissonant to consonant cognitions (Cohen, 1964). One becomes behaviorally committed and dissonant cognitions become fewer while consonant cognitions become more numerous. Therefore, the more compelling the reasons for doing what goes against one's values, the less the resultant dissonance.

There are certain differences between the laboratory type studies that the above example illustrates and the study concerning corpsmen attitudes. First, the laboratory setting studies do not have the same characteristic conditions that are inherent with a field study. The conditions of a laboratory study may use issues of concern to the subjects, but the intensity of behavioral commitment is certainly much greater for subjects who are trainees for the Fleet Marine Corpsmen group.

In the above laboratory study, subjects were selected who were initially reputed to be polarized unfavorably toward a given issue. The assumption is made that positive positions will grow more positive when initial positions are positive and when the communication is positively oriented. The training situation which is this study's analog to communication is designed to instruct and provide knowledge pertaining to an unpleasant future situation, where even greater behavioral commitment is required. The communication used in the laboratory study does not endanger one's well being, and it is transient. The corpsman study used subjects who had been trained (communicated to) for approximately five weeks under rigorous conditions. New knowledge is learned by the subjects during training. The nature of this knowledge and the setting is expected to determine the direction of change. Behavioral commitment in the Janis and King study resulted in subjects changing their attitudes toward the discrepant position. In the corpsman study attitudes should change away from the discrepant position. This may at first appear to be an inconsistent expectation. However, the differences between the conditions

of the settings disclose an appropriate explanation. For the Janis and King study, the amount of personal cost in mental anxiety and time was inconsequential. Also, subjects were volunteers. Discrepancy between an individual's initial evaluation and the communication could not be near its maximum relative to a setting where time was in terms of hours. Few issues could be so psychologically charged when presented in a laboratory setting that a subject might feel that they related to his very existence. Subjects in the Janis and King study apparently were more concerned with improvisation and performance satisfaction than with the issues at hand. This level of behavioral commitment might be better termed laboratory induced behavior. Naturally, if the subject takes an active part and becomes his own communicator, his ego-involvement tends to increase with his immediate task, and he becomes his own reference object. The issue might tend to become secondary in such a setting, lending to the development of an expectancy effect.

For the corpsman study, subjects were not volunteers. Also contributing to the possibility for negative attitude change for certain issues are the following conditions: high degree of mental anxiety due to fear of the unknown; continuous rigorous activity, and an underlying attempt to change attitudes and behavior by providing information which was thought to favor the development of a Marine reference group. Brehm (1960) found that when a person is committed to unpleasant behavior, he tends to like the behavior less if he is exposed to information favoring it than if the information is against it. Behavioral commitment over time does

exist in a behavioral setting for this study and issues are relative to a rigorous set of conditions. Therefore, change in attitudes represents a measure of psychological defense for the corpsmen subjects, while the subjects for Janis and King's experiment changed their attitudes more likely as a function of variables related to expectancy within the laboratory setting.

Field studies which have pertained to stressful situations over time should be recognized. Motivation and emotion were variables studied in relation to "Adaptation to Extreme Environments" by E. K. Eric Gunderson through the facilities of the Navy Medical Neuropsychiatric Research Unit and under the auspices of the Navy Department (1966). The extreme environment was a set of isolated duty stations in Antarctica. Several stressful characteristics were discovered as significant content areas of relevance. Gunderson also found that the greatest amount of criterion variance was accounted for by three trait clusters:

1. Emotional stability
2. Task motivation
3. Social compatibility

It was felt that an individual's own report of his attitudes toward his job and situation was a pertinent source of data for evaluation of success in adaptation. Two general areas for attitude measurement were:

1. Changes in task motivation or job satisfaction measured by questionnaires during the winter period at Antarctic stations and the correlates of these changes, and

2. Measures of motivation for the Antarctic assignment derived from questionnaires administered

> at a psychiatric screening and the relationships of these motivation measures to later performance.

Attitudes were measured on groups twice during the winter period. Results corroborated earlier findings that scales reflecting group harmony and efficiency showed considerable change in the direction of deterioration.

Although the Antarctic setting is much different than the one at FMSS, the stressful situation does include physical hardship and the study was concerned with attitudes toward the job and situation. Thus, for the corpsman study we can anticipate finding a general morale deterioration and low motivation as reflected by the anticipated negative changes in attitudes.

Another study by Nelson and Berry (1966), under the same auspices as Gunderson's work, considered the attitudes of Marines during their first enlistment. The attitudes held by enlisted Marines toward re-enlistment, leadership, and their military organization were assessed after ten weeks of basic training and again after two years of service. Two-year attitudes were positive in affect although somewhat lower in intensity than those held upon completion of basic training. It was suggested that initial enthusiasm faded over time. Also, attitudes toward the Marine Corps as an organization became less favorable. For the corpsman study, a scale concerning Navy Careers, would be oriented to the organization itself, and should demonstrate negative changes in attitudes. Although fading enthusiasm over time should not account for such change over five weeks,

it is a plausible expectation that negative expression towards an impersonal entity could.

Six issues were conceived with the corpsman and FMSS training especially in mind. The expectation was that attitudes concerning some of these issues would change negatively while others would tend to change positively.

The Sherif Method of Ordered Alternatives (Sherif, Sherif, & Nebergall, 1965, Ch. 2) was chosen as the instrument to measure attitude changes. This instrument was selected for the following reasons:

1. It provides a meaningful way to determine attitudes.
2. It is powerful in discriminating changes in attitude.
3. Initial responses to the instrument have been found to predict the direction of attitude change. (See also, Sherif & Hovland, 1961; Sherif & Sherif, 1967).

Attitudes for Sherif are inferred from characteristics patterns of an individual's behavior toward objects, words or deeds (Sherif & Cantril, 1947; Sherif, Sherif, & Nebergall, 1965). An individual develops attitudes through interacting with objects in his environment. Some of these attitudes become constituents of his ego system, i. e., the attitudes making up his self concept. They serve as anchorages relative to the classes of objects under consideration.

In measuring attitudes by one method Sherif presents respondents with a set of nine statements representing positions of varying degrees of favorableness-unfavorableness toward the object being assessed. The

respondent is asked to choose: The alternative most acceptable to him; other acceptable alternatives; the alternative most objectionable to him; and other objectionable alternatives. Sherif then defines the "latitude of acceptance" as the position most acceptable plus other acceptable positions on an issue, the "latitude of rejection" as the most objectionable position on the same issue plus other objectionable positions and the "latitude of noncommitment" as those positions not categorized as either acceptable or objectionable in some degree. It is assumed that the nine positions on the scale are clearly defined alternatives on a social issue ranked from extreme favorableness to extreme unfavorableness toward the object. No assumptions are made about relative sizes of intervals between ranks, nor is it assumed that the positions are cumulative (Sherif, Sherif, & Nebergall, 1965, 24-27).

Not all social dimensions are cumulative in the sense that endorsement of a position implies acceptance of less extreme positions. Guttman scales employ this characteristic pattern of cumulativity (Guttman, 1950). Another prominent method of attitude measurement is the semantic differential developed by Osgood (Osgood, Suci, & Tannenbaum, 1957). This method employs a linear rating scale, usually with a range from -3 to +3, where favorable evaluations are positive integers and unfavorable ratings are negative integers. Zero is arbitrarily defined as neutrality.

Mehling (1959) investigated the relationship between attitude position as measured by the semantic differential and the intensity of the attitude. Two groups of 16 subjects responded to a number of semantic

differential scales measuring attitudes toward prominent figures. The subjects were then asked to check a number on a scale from 0 to 9 indicating how strongly they felt about the position they had checked on the semantic differential scale.

A V-shaped curve was found when the subjects' ratings for each numbered intensity scale was plotted against ratings for the related semantic differential scale. Thus a person felt more certain about an extreme attitude than about a neutral one. It appears that the semantic differential measured both direction and the intensity of the attitude.

Findings by Sherif indicate that psychologically a discrepancy between a +1 and a +3 may not be considered equal to a discrepancy between a -1 and a +1 (Sherif, Sherif, & Nebergall, 1965) as the Osgood method would assume. An individual's stand should not be represented as a point along a continuum partly because of the above discrepancy and also because an attitude is more realistically conceived as a set of evaluation categories implying patterns of acceptance, rejection, and noncommitment. Since the individual determines for himself the number of positions that he accepts, rejects, or toward which he remains noncommitted, there is less restriction imposed on the individual pertaining to his attitudinal specification. Thus, the Sherif method has advantages over both Guttman and Osgood type scales.

The first attempt to assess latitudes of acceptance and rejection was made in 1948-1949 by M. Sherif, C. I. Hovland, and E. Volkart on the closed-shop issue (Sherif, Sherif, & Nebergall, 1965, p. 23).

Subsequent research utilized the prohibition issue in Oklahoma (Hovland, Harvey, & Sherif, 1957) and the presidential election campaign of 1956 (Sherif, 1960; Sherif & Hovland, 1961). Other issues for which the latitudes of acceptance and rejection were measured include: farm policy, right to work, desegregation, and reapportionment of state legislatures.

Several studies reported by Sherif et al (1965) demonstrate little between-subject variation in the size of the latitude of acceptance. However, the latitude of acceptance is useful in determining the direction of attitude change. Its part in this determination will be explained in a later section.

The latitude of rejection is the best indicator of what Sherif labels "ego involvement," i.e., the extent to which attitudes of importance to the self-concept operate in an individual for a given situation. The latitude of noncommitment is a function of a subject's latitudes of acceptance and rejection. The attitude measures considered to be most important are the most acceptable position and the latitude of rejection, since they provide the simplest and most reliable measures of change in attitude and ego-involvement.

The object of this study was to discover how attitudes concerning issues related to hospital corpsmen do change as a function of FMSS training. Since the hypotheses generated must relate to the chosen issues, the logical support for these issues must be specified. Two basic criteria were employed in choice of issues:

1. Each issue must be a matter which could potentially

tap ego-referents, i. e., those matters which have to do with subject's major areas of concern.

2. Each issue must be of such a nature that variation in attitude may be exhibited due to the subject's individual standards and judgments.

Thirty issues were considered for possible development into scales. From these issues, six were selected on the basis of the two above criteria. The rejected issues were either redundant with respect to those selected or upon re-evaluation were judged to lack appropriateness for inclusion.

It was realized that the group for which the issues were developed was being trained for the purpose of saving lives. Therefore, variation in attitudinal judgment should be demonstrated through the use of issues concerning Saving Lives and Helping Others (Work). The former issue was thought to be oriented to the battlefield, and the latter toward Naval corpsman duty, i. e., ships and hospitals. Since the majority of corpsmen are currently sent to the Fleet Marines, attitudinal measures were obtained on an issue related to that assignment. Potentially, there is much individual variation with respect to the perception of one's group and its status. Thus, perceived respect for the corpsman rating was utilized as an issue for attitude measurement. The Navy as a career represents an organizational referent and was thus used as an issue. Desired acceptance from those with whom one works was expected to indicate the effect of FMSS on attitudes toward working with the Marines, since the training is oriented

to and taught by the Marines and Fleet Marine Force (FMF) Corpsmen.

In order to predict that attitudes on these issues will change and in what direction they will change, it was necessary to have a theoretical structure from which such predictions would be made. Conditions for the given situation were delineated for this purpose. Specification of conditions relative to attitude change susceptibility is provided by the Sherif social-judgment-involvement approach. Sherif's theory predicts increased attitude change with communication-attitude discrepancies when these discrepancies are within the assimilation range (which is affected by both degree of involvement and stimulus structure), but decreasing change with larger discrepancies and no change and/or change away from communication with most extreme discrepancies (Sherif, Sherif, & Nebergall, 1965).

Sherif indicates that in order for change in the favorable direction to occur that one or a combination of the following conditions must prevail:

1. The object (stimulus) of evaluation is unstructured.
2. The issue is unfamiliar to the subjects.
3. The discrepancy between the individual's initial evaluation and the communication is not near its maximum.
4. The communicator is acceptable in terms of the subject's reference group ties.

Conversely, attitude change toward communication increases with small attitude-communication discrepancies and then decreases to

no change or negative change with increasing discrepancies when the conditions exist as:

1. The object of evaluation is well-structured.
2. The issue is familiar and subjects are highly ego-involved in their stands.
3. Discrepancy between the subject's initial evaluation and the communication is increased to its possible limits.
4. The communicator is not acceptable.

No single or formal communication was distinguishable as the experimental treatment communication. What is communicated by FMSS is hard to specify and must be thought of as a package communication. Only when the situation itself is experienced can the above dimensions apply. Thus, hypotheses were made on the basis of Sherif's criteria for susceptibility to attitude change as these conditions were observed to prevail during attendance of FMSS. The attitudes (own positions) on the following issues were hypothesized to change in the negative direction.

1. Saving lives
2. Fleet Marines
3. Navy careers
4. Acceptance

For each issue, the object of evaluation was well structured, each issue was familiar, discrepancy increased as the training advanced, and the communicators of the training were members of a reference group that

was unacceptable to the subjects in general.

The attitudes (own positions) on the following issues were hypothesized to change slightly in the positive direction:

1. Helping of others (Work)
2. Respect for the Corpsman rating

Instruction at HCS is oriented toward helping others in Navy situations or hospitals. The issue was a familiar one. Although there was no perception of the training effecting a dislike for helping others, the membership group "Corpsman" was often observed not to be a reference group. Thus, only slightly positive attitude change can be predicted. Newcomb (1958), studying the outlooks of college students, found that the degree of liberality in attitudes depended on the individual's reference groups. Those who retained reference groups outside the college as the basis for judgment, tended to remain conservative. Since FMSS is over a much shorter time span, it may be anticipated that many established reference groups will remain the same, i. e., many subjects will not establish a Marine reference group from FMSS training alone.

It was anticipated that perceived respect for the corpsman should not change significantly in the positive direction with a reorientation of thought about the concept itself. For those that perceive the "Marine" corpsman as the object of reference, the membership group, "Corpsman," should assume an unfavorable conceptualization. Such a result would be a function of wishing not to become members of the Marine Corpsman group.

Since each company has different military drill instructors, the particular emphasis imposed by a given instructor produces an effect on each individual company. Also, two companies in this study were to receive instruction apart from two others except for bivouac training. Although the subject material covered was the same for all companies, some differences were expected as a function of emphasis in delivery. These instruction divisions are considered separately in the analysis of the data.

It was hypothesized that subjects would become less ego-involved (i. e., latitude of rejection would decrease in size) with the chosen issues as a function of FMSS training. Most of the training was militarily oriented, with emphasis on discipline and physical performance. When FMSS students were confronted with unpleasant tasks to perform, for example, those requiring physical exertion, the popular phrase became, "If I can't make it, what will they do, send me to Nam?" This verbal reaction suggests a defense against both the FMSS conditions and their ultimate duty assignment. Thus, the issues become objects for avoidance, and afford an opportunity to express this defensive reaction. Since the issues should not be considered important to the avoidance oriented subjects' self-concepts, the expectation is that decreased ego-involvement with the issues will result.

The final set of hypotheses concerned prediction of attitude-direction change as a function of the initial responses by the subjects to the survey instrument. Unlike other measurement techniques, Sherif's approach

employs latitudes of acceptance, rejection, and noncommitment. He found that the latitudes of acceptance for some respondents were symmetrical around the most acceptable stand while others were asymmetrical. His studies indicate respondents have a significant tendency to assimilate positions in the direction of the longer segment for an asymmetrical distribution around the most acceptable position and that attitude change was in the direction of the longer segment (Sherif, Sherif, & Nebergall, 1965). If a subject's latitude of acceptance was symmetrically distributed around his most acceptable position, change was found to be in the direction away from the position indicated as most objectionable. Therefore, it was hypothesized that the direction of attitude changes would be predicted significantly for this study on the basis of his findings.

It should be emphasized that the hypotheses concerning attitude change and ego-involvement were based on the Sherif theory of susceptibility to attitude change. An application of this theory requires specification of the conditions for the situation being studied in order to make predictions regarding direction of attitude change. The specifications of conditions prevailing in the FMSS situation were made from observations perceived during attendance of that training. From those specifications, hypotheses were generated in accord with the Sherif approach.

Hypotheses based on distribution symmetry of other acceptable positions about a most acceptable position were also a result of Sherif's theoretical approach. Here, however, specifications of attitude direction changes were based on initial responses to the measuring instrument itself.

Summary of Hypotheses

I. Change in attitude (own position):

   A. Negative direction on:

      1. Saving Lives

      2. Fleet Marines

      3. Navy Careers

      4. Acceptance

   B. Slightly positive direction on:

      1. Helping Others (Work)

      2. Respect

II. Latitude of rejection (ego-involvement) decreases in size for all issues.

III. Direction of change in own position is predicted by initial distribution of the latitude of acceptance around own position:

   A. Movement of most acceptable position toward longer segment of the latitude of acceptance

   B. Movement away from most objectionable position if the latitude of acceptance is symmetrical around the most acceptable position.

CHAPTER II

METHOD

The attitude survey created for this study was administered to the fourth class in 1968 to be trained at Camp Del Mar of Camp Pendleton, California. This class, #6804, was divided into four companies:

Company A N = 71

Company B N = 98

Company C N = 68

Company D N = 100

Since the primary interest was to discover the effect of FMSS training on the attitudes of a cross section of students who had attended the school, validation and cross-validation groups were obtained by randomly selecting equal numbers of subjects from each of the four companies. This procedure yielded a validation group with N = 169 and a cross-validation group with N = 168. In order to ascertain whether or not test-retest effects occurred, an additional class was tested at the end of its training. This class was designated #6806, and included 161 subjects.

The six issues, for which change measures were obtained, were specified as a part of developing the hypotheses. The words used in all of the issues were checked in Thorndike and Lorge's "The Teacher's

Word Book of 30,000 Words." All words were below the seventh-grade level of formal education. Since all subjects had a ninth-grade level of formal education or better, the words themselves should not be a source of comprehension difficulty. Four other psychologists as well as five subjects from the Naval Training Center, in San Diego, California, were administered the issues to determine if syntax and order were suitable. Their evaluations and comments resulted in the adoption of the issues for the purpose of this study. (See Appendix A.)

With regard to administration of the Survey, the following instructions were read to the subjects:

> "You have been handed an Attitude Survey Booklet, an answer sheet, and a pencil. Do not turn over the booklet or answer sheet until I tell you to do so.
>
> The booklet contains statements on issues related to you as a Corpsman. This is not a test. Your answers are right or wrong only in terms of your truthfulness. All answers will be treated confidentially. They will not become a part of your military record, nor will the answers have any bearing on your military careers.
>
> Now look at the answer sheet. We will begin by filling out the information required above the double black line. For the rest of this questionnaire follow my instructions carefully. Do not work ahead.
>
> Everyone write in the space after the word Form, the number (1) or (2). Now write in your company number. Next, print your name, last name first. Also, write in your service number, your rate, and today's date which is _____day_____ month_____year.
>
> Now look at the Attitude Survey Booklet. Count the pages to see that there are six pages following the instruction page. Follow along as I read the instructions which are on the first page of your booklet. As I read, there will be some elaboration made to the instruction sheet, so please listen carefully.

There are six pages following this instruction page. Each page concerns a different issue. Every issue is indicated at the top of the page. For example, the first issue is about saving lives. For each of the six pages, check to see that the order is the same as the correspondingly named issues on your answer sheet. Raise your hand if the order is incorrect or if you are missing any pages. Check the order of the pages now.

Each page of your booklet concerns a different single issue and has nine statements on it. These nine statements are numbered 1 through 9. These statements express various positions on the specific issues.

We will now do the example together.

For the first issue, that is, on saving lives, read all the nine statements carefully. You will find these statements on the next page. Do that now. Now that you have read all the statements concerning the issue, turn to your answer sheet. All answers are to be made on this answer sheet. No marks should appear on the booklet. Also do not write in the left hand margin of the answer sheet. From the nine statements, choose the one most acceptable statement or position and indicate that statement on your answer sheet by circling its number to the right of the phrase which says most acceptable position. You must circle only one number. Do that now.

Now choose any other statements which are also acceptable and circle the corresponding numbers to the right of the phrase which says, 'other acceptable positions.' Do that now. If there are no other acceptable positions for you, do not circle any additional numbers.

Next- re-read the statements and choose that one statement which is most objectionable, that is, that you like the least of all. Do that now. Now, circle on your answer sheet the corresponding number to the right of the phrase which says most objectionable position. You must circle only one number. Do that now.

Finally, choose any other statements which are also objectionable and circle the corresponding numbers to the right of the phrase which says, other objectionable positions. Do that now. If there are no other objectionable positions for you, do not circle any additional numbers.

You now have completed an example to work from. Are

there any questions? You will do the remaining five questions following the same procedure as in the example."

See Appendix B for data information.

Data Collection, Variables Used, and Statistics for Analysis

The first collection of the data, from Class #6804, was taken at the inception of FMSS. At the completion of FMSS, data was collected again in order that change measures might be obtained. Following the completion of FMSS by Class #6806, the survey was administered to its subjects. All data was collected on an answer sheet. This procedure differed from that previously used with this type of instrument. The usual practice has been to administer the separate set of nine-point scales for each measure. The principal advantage to using the answer sheet is that it allows simpler and faster coding procedures to be employed with the resultant conservation of time.

Modes of attitudes (most acceptable positions) and ego-involvements (latitudes of rejection) for the six issues were compared between the first and second administrations to Class #6804. Similar comparisons were made between the second administration to Class #6804 and the administration to Class #6806. Class comparisons were also made using the median scores for the considered variables. Then, the means of age and education level were tested for significance by t-tests for selected comparison groups. Information regarding age and education had been made available by the personnel office of FMSS.

Three variables were selected from the data that were used in the analysis. The first variable was the most acceptable position. This variable was coded 1 through 9 corresponding to the statements (positions). Attitude change in the most acceptable position was obtained by subtracting the numeric code of the most acceptable position held after FMSS from that obtained before FMSS. Positive change scores indicated change toward the (1) statements, while negative change scores indicated change toward the (9) statements.

The second variable was the latitude of rejection code score. This code score can range from 1 to 8, since the most acceptable position automatically deletes one choice from the possible statements for rejection. Since the code for ego-involvement numerically increases for increased ego-involvement, change scores were obtained by subtracting the code score obtained initially from the code score obtained after FMSS training. Positive change scores indicated increased ego-involvement, while negative change scores indicated decreased ego-involvement.

The third attitudinal variable was the measure from which prediction of attitude direction change was made as a function of subjects' initial responses to the survey instrument. If the subject's latitude of acceptance was asymmetrically distributed around his most acceptable stand, a plus one was tabulated for a skew toward the (1) statement direction of the issue and a zero was tabulated if the skew was toward the (9) statement direction. If the subject's latitude of acceptance was symmetrically distributed around his most acceptable stand, a plus one was tabulated if the

direction away from the most objectionable position was toward the (1) statement direction, and a zero was tabulated if the direction away from the most objectionable position was toward the (9) statement direction.

The Method of Ordered Alternatives does not assume equal interval scaling as a characteristic. It does, however, assume nominal and ordinal characteristics for its scales. Thus, the statistical tests employed to analyze the data were those which could operate under the assumptions of nominality and ordinality.

In order to test the attitude change and ego-involvement change hypotheses for directional significance, the large sample one-tailed Wilcoxon Matched-Pairs Signed Ranks Test was employed. This test utilizes information about the relative magnitude as well as the direction of differences for pairs of scores. More weight is given to a pair which shows a large difference than to a pair which shows a small difference (Siegel, 1956).

For hypotheses regarding the prediction of directions of attitude change as a function of subjects' initial responses, the large sample binomial test was utilized (Siegel, 1956). Since each sample was larger than 25 subjects, the large sample test must be used. This test is employed where the population consists of two discrete classes of objects. In this instance, correct and incorrect predictions are the two classes. If chance were responsible for the results, then the probability of correct prediction would equal the probability of incorrect prediction. No predictive ability would be exhibited when the number of incorrect predictions

approached the value of the product N (the number in the sample) times the probability that a correct prediction would occur. If significant results are produced, the number of incorrect predictions will be much smaller than the product of N times the probability of correct prediction and standard deviation scores will be negative.

CHAPTER III

RESULTS

Table 1 gives the modes of the most acceptable positions and ego-involvement scores that were obtained from the first administration to Class #6804. It also provides the modes obtained from the second administration to that class. The modal results are the same except for two notable differences. Ego-involvement with the issue Saving Lives decreased from the first administration to the second as evidenced by a modal shift from four to two, and the modal attitude regarding the Fleet Marine issue shifted from four to five.

Table 2 provides a comparison between the modes from the second administration to Class #6804 and those obtained from Class #6806. There was just one difference noted between these two classes. The attitude mode of Class #6804 for the issue concerning Fleet Marines was five, while the mode of Class #6806 on this issue was six. However, there were very nearly as many subjects from Class #6804 who were included in the mode category of six as in the category five. Also, there were very nearly as many subjects from Class #6806 in category five as were included in category six.

Table 1

Modes of Most Acceptable Positions and Ego-Involvements from the First and Second Administrations to Class 6804

Issue	Variable	Modes from Class 6804 First Administration	Modes from Class 6804 Second Administration
Save Lives	Most acceptable position	2	2
	Latitude of rejection	4	2
Work	Most acceptable position	3	3
	Latitude of rejection	2	2
Fleet Marines	Most acceptable position	4	5
	Latitude of rejection	2	2
Respect	Most acceptable position	2	2
	Latitude of rejection	2	2
Navy Career	Most acceptable position	4	4
	Latitude of rejection	2	2
Acceptance	Most acceptable position	2	2
	Latitude of rejection	2	2

Modes of Variables from the Second Administration to Class 6804 and the Modes of Variables from the Administration to Class 6806

Issue	Variable	Modes from Class 6804 Second Administration	Modes from Class 6806 After FMSS
Save Lives	Most acceptable position	2	2
	Latitude of rejection	2	2
Work	Most acceptable position	3	3
	Latitude of rejection	2	2
Fleet Marines	Most acceptable position	5	6
	Latitude of rejection	2	2
Respect	Most acceptable position	2	2
	Latitude of rejection	2	2
Navy Career	Most acceptable position	4	4
	Latitude of rejection	2	2
Acceptance	Most acceptable position	2	2
	Latitude of rejection	2	2

Table 3 gives the crude medians of the most acceptable positions and ego-involvements (latitudes of rejection) from the first and second administrations to Class#6804 and from the administration to Class 6806. These results indicate only one difference between the first and second administrations to Class #6804: The median of ego-involvement for the issue, Save Lives, shifted from three to two. No differences existed between the second administration to Class #6804 and the administration to Class #6806.

The mode tabulations reveal in which categories the greatest numbers of subjects are included for the given set of possible attitudinal and ego-involvement categories. The median tabulations indicate the categories from which the numbers of subjects in either direction will be approximately the same. If large shifts occur for many subjects, the measures of central tendency will change. Also, if the distributions of responses are very nearly the same in two adjacent categories a few response changes can result in central tendency shifts. The latter case occurred in a few of the results described. Only one case of the former type occurred. That case was the modal change in ego-involvement with the issue, Save Lives, where the mode from the first administration was four and that from the second was two. Since no differences of the first type were found between the results from the second administration to Class #6804 and the results from the administration to Class #6806, it can be assumed that no appreciable effect on the second administration results occurred as a function of prior testing experience for Class #6804.

Table 3

Medians of Most Acceptable Positions and Ego-Involvements from the First and Second Administrations to Class 6804 and from the Administration to Class 6806

Issue	Variable	Medians from Class 6804 First Administration	Medians from Class 6804 Second Administration	Medians from Class 6806 After FMSS
Save Lives	Most acceptable position	2	2	2
	Latitude of rejection	3	2	2
Work	Most acceptable position	3	3	3
	Latitude of rejection	2	2	2
Fleet Marines	Most acceptable position	5	5	5
	Latitude of rejection	2	2	2
Respect	Most acceptable position	2	2	2
	Latitude of rejection	2	2	2
Navy Career	Most acceptable position	5	5	5
	Latitude of rejection	2	2	2
Acceptance	Most acceptable position	2	2	2
	Latitude of rejection	2	2	2

Although the above results are appropriate to determine major discrepancies between the two classes tested, modes and medians provide negligible information about changes occurring for individual subjects. This information is provided by change scores for individuals, calculated from the results obtained from the two administrations to Class #6804.

Two additional variables were considered relevant and basic to the sensible interpretation of changes in attitude and ego-involvement. Both age and education level could influence these changes if significant differences were found to exist for the comparison groups. Means for age and education level were obtained for the following group comparisons:

1. Validation group versus cross-validation group
2. Validation group versus Class #6806
3. Companies A and B versus Companies C and D
4. Company B versus Company C
5. Prior duty station: HCS versus
   All Others.

Table 4 indicates the t-test results and significance levels for the comparison groups regarding the variables of age and education level. From this table it is clear that both validation and cross-validation groups are essentially statistically equivalent with respect to both variables.

The range in age was much greater in Class #6806 than that found in Class #6804, and the results indicated that the difference between the means for validation group and Class #6806 was significant. However, the education levels of both groups appeared to be approximately equivalent.

Table 4

Comparisons of Groups Studied Concerning the Variables of Age and Education Level

Groups	Variable	t	Alpha
Validation versus Cross-Validation	(Age)	-.876	.1912
Validation versus Cross-Validation	(Ed. lev.)	-.475	.3177
Validation versus Class 6806	(Age)	-10.203	.0001
Validation versus Class 6806	(Ed. lev.)	-.625	.2670
Companies A and B versus Companies C and D	(Age)	.571	.2850
Companies A and B versus Companies C and D	(Ed. lev.)	-.795	.2143
Company B versus Company C	(Age)	2.178	.0155
Company B versus Company C	(Ed. lev.)	-1.745	.0416
Prior duty stations: HCS versus All Others	(Age)	-7.358	.0001
Prior duty stations: HCS versus All Others	(Ed. lev.)	1.337	.0914

For the Class #6804, it was found that age and education levels were statistically the same for Companies A and B versus Companies C and D. Since these sets of companies were trained separately, any differences in attitudes should be the result of differences in training.

Among the four companies, Companies B and C demonstrated the greatest difference between means for these variables. The results from comparing Company B with Company C indicate that the average age in Company B is significantly higher than the average age in Company C. Also, the average educational attainment is significantly lower in Company B than the average educational attainment in Company C. These individual companies were within separate instruction groups, i.e., Company B was instructed with Company A, while Company C was instructed with Company D. These facts will be considered in the discussion section.

The group composed of those subjects from the HCS prior duty station was found to have a significantly younger average age than those who composed the All Others prior duty station group. There also was a tendency for the HCS group to have a higher average educational level attained than that of the All Others group. The interrelationship of these variables for the compared groups will also be considered in the discussion section. The former group included 139 subjects, while the latter included 197 subjects.

Since data was collected only at the termination of training for Class #6806, no attitude change data could be obtained. The significance levels from the tests on attitude changes (Table 5) and ego-involvement

Table 5

Z-Scores and Significance Levels from Tests on Attitude Changes for Each Issue in Class 6804 by Comparison Groups*

	Validation			Cross-Validation		
Issue	Sign**	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	2.82	.0024	-	2.31	.0107
Work	+	.015	.5060	-	1.15	.1259
Fleet Marines	-	4.29	.0001	-	2.94	.0017
Respect	+	.0962	.5384	-	.694	.2438
Navy Career	-	3.21	.0007	-	3.21	.0007
Acceptance	-	.983	.1629	-	2.05	.0202

	Co's A & B			Co's C & D		
Issue	Sign	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	2.33	.0099	-	2.70	.0035
Work	+	.138	.5547	-	1.18	.1187
Fleet Marines	-	3.24	.0007	-	3.94	.0001
Respect	-	1.16	.1223	-	1.70	.0445
Navy Career	-	3.81	.0001	-	2.94	.0017
Acceptance	-	1.81	.0352	-	1.42	.0776

*The test for attitude changes was the large sample one-tailed Wilcoxon Matched-Pairs Signed Ranks Test.

**Sign indicates if the Z obtained was positive or negative.

Table 5 (Cont.)

	HCS			All Others		
Issue	Sign	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	2.53	.0058	-	2.53	.0057
Work	-	.588	.2783	-	1.58	.0573
Fleet Marines	-	5.87	.0001	-	1.57	.0583
Respect	-	1.98	.0242	-	1.23	.1096
Navy Career	-	3.73	.0001	-	2.84	.0024
Acceptance	-	1.05	.1469	-	1.95	.0256

	Co. A			Co. B		
Issue	Sign	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	.795	.2134	-	2.38	.0087
Work	-	.911	.1812	-	.603	.2735
Fleet Marines	-	3.19	.0008	-	1.54	.0618
Respect	-	1.24	.1075	-	1.14	.1366
Navy Career	-	2.83	.0024	-	2.37	.0089
Acceptance	-	1.67	.0479	-	.921	.1786

Table 5 (Cont.)

	Co. C			Co. D		
Issue	Sign	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	.276	.3912	-	3.14	.0009
Work	-	.848	.1982	-	.841	.2002
Fleet Marines	-	1.89	.0295	-	3.59	.0002
Respect	-	.660	.2546	-	1.69	.0458
Navy Career	-	.613	.2701	-	3.16	.0009
Acceptance	-	.483	.3145	-	1.39	.0819

changes (Table 6) for each issue in Class #6804 are tabulated by comparison groups. Immediately following is Table 7 which gives the significance levels from the tests on prediction of attitude direction changes as a function of initial responses to the survey instrument for each issue by comparison groups. The results tabulated in these tables will be extensively interpreted in the discussion section.

The results demonstrate the confirmation of the following hypotheses: Negative attitude change for the issues: Save Lives, Fleet Marines, and Navy Careers. The attitude change for the issue, Acceptance, was also hypothesized to change negatively. Although the results were significant in the cross-validation group for the issue concerning Acceptance, those results obtained from the validation group were not significant.

The non-significant results found for the issues, Helping Others

Table 6

Z-Scores and Significance Levels from Tests on Ego-Involvement Changes for Each Issue in Class 6804 by Comparison Groups*

	Validation			Cross-Validation		
Issue	Sign**	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	3.46	.0003	-	.201	.4205
Work	-	1.37	.0855	-	1.11	.1331
Fleet Marines	-	1.58	.0576	-	.579	.2813
Respect	-	2.14	.0161	-	1.90	.0285
Navy Career	-	.144	.4428	Equal sides		.5000
Acceptance	-	1.65	.0501	-	1.81	.0351

	Co's A & B			Co's C & D		
Issue	Sign	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	2.76	.0029	-	.977	.1643
Work	-	2.44	.0076	+	.398	.6548
Fleet Marines	-	3.24	.0006	-	.705	.2406
Respect	-	3.49	.0003	-	1.16	.1234
Navy Career	-	1.54	.0622	-	1.68	.0464
Acceptance	-	3.46	.0004	-	.433	.3326

*The test for ego-involvement changes was the large sample one-tailed Wilcoxon Matched-Pairs Signed Ranks Test.

**Sign indicates if the Z-score obtained was positive or negative.

Table 6 (Cont.)

	HCS			All Others		
Issue	Sign	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	1.59	.0561	-	2.45	.0073
Work	-	1.13	.1296	-	1.35	.0884
Fleet Marines	-	1.67	.0475	-	.401	.3444
Respect	-	2.61	.0046	-	1.92	.0273
Navy Career	-	.291	.3857	+	.129	.5515
Acceptance	-	.855	.1963	-	2.66	.0039

	Co. A			Co. B		
Issue	Sign	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	2.40	.0082	-	1.57	.0581
Work	-	2.20	.0139	-	1.46	.0726
Fleet Marines	-	2.05	.0203	-	2.56	.0052
Respect	-	3.08	.0011	-	1.99	.0233
Navy Career	-	1.01	.1565	-	1.18	.1199
Acceptance	-	1.99	.0231	-	2.48	.0067

Table 6 (Cont.)

	Co. C			Co. D		
Issue	Sign	Z-Score	Alpha	Sign	Z-Score	Alpha
Save Lives	-	2.05	.0201	-	.033	.4869
Work	-	.375	.3538	+	.235	.5929
Fleet Marines	-	.217	.4155		equal sides	.5000
Respect	-	.935	.1748	-	.819	.2065
Navy Career	-	.655	.2562	-	1.59	.0557
Acceptance	+	.067	.5269	-	.651	.2577

(Work) and Respect, indicate that there are a considerable number of the subjects who do change their attitudes positively. Further explanation will be given in the discussion section.

Ego-involvements with all issues were hypothesized to decrease. The general trend found was a decrease in ego-involvement. However, levels of significance in the validation and cross-validation groups showed a lack of correspondence for the issues, Save Lives and Fleet Marines. Cross-validating significantly for decreased ego-involvement were the alphas of the issues concerning Respect and Acceptance. Further attention will be given to ego-involvement in the discussion section.

Of further interest are the results found concerning group comparisons. Since no formal hypotheses were expressed about these results, the findings and explanations for them will be presented in the discussion section.

Table 7

Z-Scores and Significance Levels from Tests on Prediction of Attitude Direction Change as a Function of Initial Responses to the Survey Instrument for Each Issue by Comparison Groups*

Validation		Issue	Cross-Validation	
Z Scores	Alpha		Z Scores	Alpha
-4.98	.0001	Save Lives	-3.47	.0003
-3.96	.0001	Work	-2.64	.0042
-4.13	.0001	Fleet Marines	-2.41	.0081
-3.74	.0001	Respect	-2.77	.0028
-2.61	.0046	Navy Career	-2.15	.0159
-2.46	.0069	Acceptance	-2.17	.0152

Cos.' A & B		Issue	Cos.' C & D	
Z Scores	Alpha		Z Scores	Alpha
-3.76	.0001	Save Lives	-4.68	.0001
-2.75	.0030	Work	-3.82	.0001
-4.06	.0001	Fleet Marines	-2.45	.0072
-3.69	.0002	Respect	-2.77	.0028
-3.04	.0012	Navy Career	-1.72	.0424
-1.85	.0324	Acceptance	-2.78	.0027

*The test used was the large sample Binomial test.

Table 7 (Cont.)

HCS		Issue	All Others	
Z Scores	Alpha		Z Scores	Alpha
-3.91	.0001	Save Lives	-4.53	.0001
-3.47	.0003	Work	-3.18	.0008
-4.51	.0001	Fleet Marines	-2.14	.0164
-3.37	.0004	Respect	-3.15	.0009
-2.90	.0019	Navy Careers	-1.95	.0255
-2.29	.0109	Acceptance	-2.34	.0096

Co. A.		Issue	Co. B	
Z Scores	Alpha		Z Scores	Alpha
-3.00	.0014	Save Lives	-2.17	.0152
-1.11	.1326	Work	-2.49	.0063
-1.66	.0487	Fleet Marines	-3.78	.0001
-1.46	.0722	Respect	-3.50	.0003
- .58	.2799	Navy Career	-3.38	.0004
-2.19	.0145	Acceptance	- .41	.3416

Table 7 (Cont.)

Co. C		Issue	Co. D	
Z Scores	Alpha		Z Scores	Alpha
-3.08	.0011	Save Lives	-3.39	.0004
-2.50	.0063	Work	-2.74	.0031
- .53	.2979	Fleet Marines	-2.47	.0067
-1.32	.0929	Respect	-2.37	.0099
-1.87	.0305	Navy Career	- .61	.2722
-2.23	.0129	Acceptance	-1.68	.0467

It was hypothesized that attitude direction change would be predicted as a function of initial responses to the survey instrument. This hypothesis was confirmed by the results where the groups considered included large N counts. Alpha levels were not significant for some issues when company size N counts were being used as opposed to the various comparison group size N counts.

CHAPTER IV

DISCUSSION

Regarding the discussion of findings obtained from this study, continuous awareness of the theoretical support must be maintained. The model specifying conditions for susceptibility to attitude change was an outgrowth of many studies reported by Sherif et al, in Attitude and Attitude Change (1965). Interpretations of the results from this study concerning attitude change depend upon his theoretical structure as applied to the experimental situation. Interpretations of the results regarding ego-involvement depend on his definition of this concept in conjunction with the particular issues used in this study. Prediction of attitude direction change as a function of initial responses to the survey instrument also is an outgrowth of Sherif's work. Hence, this work is the basis of similar predictions for the corpsman study.

Table 5 shows the significance levels from tests on attitude changes while Table 6 shows the results for ego-involvement changes for each issue in Class #6804. For interpretive convenience the results were arranged by comparison groups. The first two groups for comparison are the validation and cross-validation groups. Negative attitude change occurred significantly for three of the six issues: Save Lives, Fleet

Marines, and Navy Careers. Significance levels of these issues in the validation group corresponded well with those obtained in the cross-validation group. Although the attitude change results tended to be negative for the issue concerning acceptance, the results in the validation group were not significant. In the cross-validation group, however, the alpha level was .02. The attitude change toward the two remaining issues: Helping Others(Work) and Respect, was not significant with regard to direction of change in either group.

Attitude change did occur as predicted for three of the four issues which were hypothesized to change in the negative direction. Theoretical support was given in the Introduction and Problem Section. Perhaps the reason that the attitude change for the issue, Acceptance, was not significantly negative was that some subjects did not anchor psychologically with the group, "Marines," while considering the issue, but used some different reference groups for judgments. The issue was worded in such a way that the Marine group was not necessarily the reference group for all respondents.

Attitude change did not occur significantly in the positive direction for the issues: Helping Others (Work) and Respect. Although, discrepancy concerning the issue, Helping Others (Work), was not observed to increase as a function of training, the issue very easily could have been psychologically linked with the battle-oriented issue, Save Lives, for a sizeable number of the subjects. This possibility suggests why many who otherwise might have changed positively did answer with negative responses.

Regarding the issue concerning Respect for the hospital corpsman, the results indicate that the membership group Corpsmen was not perceived with acceptance and that this probably was due to the psychological linkage for subjects with the reference group, "Marine." Since this unacceptable group apparently was the object of reference for many subjects, their responses were negative rather than positive. This result was indicated in the Introduction and Problem Section in terms of orientation of thought.

Ego-involvements with all issues were hypothesized to decrease. There appeared to be some inconsistency regarding these results between the validation and cross-validation groups, although ego-involvements for all issues were found to be negative (to decrease) with respect to overall direction change. For the issue, Save Lives, ego-involvement was found to decrease very significantly in the validation group, while in the cross-validation group ego-involvement change was not found to be significant whatsoever. A similar result was found regarding the issue, Fleet Marines. Cross-validating significantly were alphas of the issues concerning Respect and Acceptance. The issues, Helping Others (Work) and Navy Careers, cross-validated but alpha levels were not significant.

Regarding Respect and Acceptance, the results indicate that subjects considered these issues unimportant with respect to their self-concepts at the termination of training relative to degree of importance felt upon entering FMSS. This is not a surprising result, since identification was not significantly positive with the reoriented concept of "Corpsman" as a "Marine." Also, subjects would not be expected to value the acceptance

or rejection judgments made by members of an unacceptable reference group.

There was no significance indicated by the alpha level for ego-involvement with respect to the issue concerning Navy Careers. The changes in direction concerning ego-involvement were about the same in both directions. This result probably occurred due to the fact that many different references were perceived on an individual basis upon consideration of the issue. Shifts in judgment certainly occurred for many of these individuals regarding the issue. This was demonstrated by the negative change in attitudes. However, for some subjects the issue became increasingly a matter of importance to their self-concepts, while for others it became less important with this regard.

Regarding ego-involvement with the issue Helping Others (Work), the alpha levels were found to be much closer to significance than the alpha levels for Navy Careers. Since the alpha levels approached significance, there was a negative change suggested in the importance that the issue held for many individuals.

Since the ego-involvement results from the cross-validation group indicate nonsignificance for the issue, Save Lives, it appears that some sampling error occurred. Both validation and cross-validation groups were composed of equal numbers from each of the four companies. Thus, the examination of constituent groups should demonstrate where this discrepancy exists. A similar but less dramatic result occurred for the issue concerning Fleet Marines. The ego-involvement alpha of the Fleet

Marine issue was .0576 for the validation group, but was .2813 in cross-validation. Hence, constituent groups must also be examined with respect to this issue.

After separating the results into individual companies, it was discovered that Company D was primarily responsible for the nonsignificant results found regarding ego-involvement with the Save Lives issue. However, the nonsignificant results found regarding ego-involvement with the Fleet Marines issue were contributed almost equally by two companies: C and D.

These findings suggest that an unusual number of subjects from Company D who had increased in ego-involvement with the issue, Save Lives, were included in the cross-validation group and that the results from the validation group therefore appear inordinately significant in the negative direction. To a lesser extent this occurred with the issue, Fleet Marines, with contributions from Companies C and D.

Regarding the group-comparisons between Companies A and B versus C and D, the following results occurred:

> Attitude change was negative and significant for issues concerning:
>
> (A) Saving Lives
>
> (B) Fleet Marines
>
> (C) Navy Careers
>
> (D) Acceptance

These results cross-validated for the instruction group comparisons, i. e.,

A and B versus C and D. However, for the issue concerning Helping Others (Work), Companies A and B showed no significant directional change in attitudes, while Companies C and D produced an alpha of .1187.

Also, for the issue, Respect, Companies A and B demonstrated nonsignficance with respect to attitude direction change, while Companies C and D demonstrated significant results. For all issues, ego-involvement decreased significantly in Companies A and B while decrease in ego-involvement occurred significantly only for the issue concerning Navy Careers in Companies C and D. These results would indicate that the training received by Companies C and D was in some significant way different from that received by Companies A and B. Although most attitudes changed negatively toward issues in both sets of companies, the significant decreases in ego-involvement for Companies A and B probably indicate that a larger number of the subjects within them felt indifferent to the issues presented. In Companies C and D, subjects responded negatively toward the issues, and many more increased their ego-involvement with the issues than in Companies A and B. These results probably reflect two ways in which a militarily-oriented training environment may be regarded. For the Companies A and B, cynical indifference appeared to serve as a balancing mechanism against the rigors of physical training. This was observed while attending the training as a member of Company B. Reports were received indicating that the drill instruction and training delivery was more unpleasant for those in the other training group, i.e., Companies C and D. Therefore, they were confronted with more

unavoidable unpleasantness than members of Companies A and B. The ego-involvement reactions with the issues either increased or decreased dependent upon the individual who is experiencing the environmental situation.

It was observed that small groups within Companies A and B tended to discuss the daily efforts with the cynical indifference mentioned. Thus, verbal support was given to the attitudes which had developed. Decreases in ego-involvement were a consistent result. Small groups naturally developed in Companies C and D. In accord with personality characteristics, individuals would cluster with their like-minded peers. Group discussions tended to support positions of indifference or verbal denigration and therefore entrench the defenses consistently with verbal exchange.

Companies A and B were separated for examination of results. Company A had nonsignificant results for attitude change with respect to the issue, Save Lives, while the results for Company B were significant. Attitudes very likely changed in both directions in Company A as a function of their training situation. Perhaps certain personality characteristics were activated by the instructor or during discussion sessions in some individuals more readily than in others. Both companies demonstrated nonsignificant results for the issues: Helping Others (Work) and Respect. Therefore, some subjects regarded these issues with more favor after their training. Apparently, these subjects perceived the above issues with favorable referents in mind. However, in each case, ego-involvement decreased, indicating that the issues were not perceived as matters of

importance to their own self-concepts.

The attitudes shifted significantly in the negative direction for subjects in both companies regarding the issues of Fleet Marines and Navy Careers. Since ego-involvement with the issue, Fleet Marines, significantly decreased in both companies, the indifference defense was apparently strongly cathected with it. The ego-involvement with the issue, Navy Career, was not significant in either company, indicating that some subjects were ego-involved about not remaining as Navy Career personnel. Ego-involvement decrease for the issue, Acceptance, was significant for both companies. Thus, very little concern for the issue is indicated in terms of its importance for the self-concepts of those in either company. However, in Company A, the attitude change was significantly negative, while it was not in Company B. This indicates that more subjects being trained in Company A considered acceptance by others less favorable to them after the training than there were who responded that way in Company B.

After separating Companies C and D for the purpose of examination, findings indicated that differences in attitude change and ego-involvement do exist between the two companies. The significance levels for the attitude change results concerning the issue, Helping Others (Work), were not significant but were equal for Companies C and D. This indicates that some subjects changed positively toward the issue of Helping Others (Work). Since ego-involvement change was also nonsignificant for both companies, there were also many subjects who considered this a matter

of importance to their self-concepts.

Attitude results for the issue, Fleet Marines, were negative and significant for both companies. Ego-involvement change was nonsignificant. Hence, many subjects felt there was ego-involving importance related to this matter for them. Across all other issues, nonsignificance for attitude change results was found to occur for Company C. Attitude results were negative and significant across all other issues in Company D. This result supports a notion that the drill instructor assigned to Company C was more successful in palatably delivering the unpleasant training, since more positive attitude change occurred than did result from the training obtained under the other drill instructors.

Ego-involvement with Saving Lives significantly decreased in Company C, showing that those stands taken in either direction on the issue were not too important to the subjects' self-concepts or that they wished to avoid the charged issue. All other ego-involvement changes with respect to the remaining five issues appeared as nonsignificant results. Therefore, many subjects increased in their ego-involvement with the issues in this company.

In Company D nonsignificant results were obtained with regard to ego-involvement change for all issues except for that one concerning the Navy Career. There was a significant decrease in ego-involvement with this issue and attitude change was significantly negative.

The nonsignificant results for the other issues indicate many subjects find that the issues do pertain to their self-concepts. The significant

decrease in ego-involvement with the Navy Career issue indicates that most subjects have no feeling that the issue is a matter pertaining to their self-concepts.

Earlier the results of age and education level for the various groups were presented. That company having the highest average age and lowest education level was Company B, while Company C was found to have the lowest average age and highest education level. The attitude change and ego-involvement change results for Company C were shown to be quite different from the results obtained from Company B. Most of these differences are attributable to training at the instruction unit level. However, certain attitude and ego-involvement changes occurred within Company A not common to Company B and similarly for Companies C and D. Therefore, the results were inspected for the purpose of discovering company attitude change traits relative to age and education level variables. The age and education level averages for Company A were higher than those for Company D. The average age found for Company A was very nearly as high as that found for Company B. Since Company A and Company B comprise an instruction unit, no explanation can account for attitude change differences in terms of age.

Company B showed a significant negative change in attitude toward the issue, Save Lives, while Company C showed no such significance. Of further interest is the finding that the alpha level was nonsignificant for attitude change regarding the same issue for Company A. Since Company C and Company A are not in the same instruction unit, it may be postulated

that a variable other than Field Medical training was responsible for this particular finding. The education level appears to be the common factor for the two companies and provides a plausible explanation for the apparent discrepancy. It may be interpreted that for the particular issue more of the subjects in the higher intelligence companies employed an adaptive defense mechanism by changing their attitudes positively toward an issue which reflects the nature of their future assignment. Company C, in which the average education level was highest, demonstrated positive attitude change tendency for four additional issues. This further suggests that the more intelligent group attempted to adapt to the undesirable conditions.

Regarding the results from the groups by prior duty station, it was supposed that for those corpsmen who came directly from HCS that their change in attitudes and ego-involvements might differ from those who had experience in the rating from any other duty station. Attitudes toward issues concerning corpsmen and their work perhaps were not rigidly set for the subjects who had just graduated from HCS. It was a matter of interest therefore to discover if those subjects did change their attitudes differently than the more experienced corpsmen from other prior duty stations.

With regard to the comparison between the means of age for these two groups, the difference was found to be significant at the .0001 level. This result indicates that the HCS group is composed of younger subjects. Although there was not a significant difference found between the groups

regarding education level, there was a slight tendency for the HCS group to have a higher average level of education.

For the issue, Save Lives, attitudes change significantly in the negative direction for both groups. Ego-involvement decreased significantly for this issue, also, for both groups. Apparently, attitude and ego-involvement differences were not a function of prior duty station for the issue, Save Lives.

No significance in attitude direction change was obtained for the HCS group, but negative change with an alpha of .0573 was obtained for the All Others group regarding the issue Helping Others (Work). Significance levels for ego-involvement with this issue were nonsignificant for both groups. Probably more of the HCS subjects perceived Helping Others (Work) in terms of altruism and with a hospital-trained orientation. Thus, many subjects responded with positive change. For the All Others group, who had been to other duty stations, two different orientations were referentially employed for judgment. First, altruism probably had transformed into an attitude of indifference, and second, their next duty stations would most certainly be assignments with Marine divisions. Since the HCS graduates ordinarily are sent to hospitals or dispensaries for several months of on the job training, their anxiety for immediate assignment with the Marines had not reached an acme. Since neither group was found to demonstrate significant ego-involvement direction change, it is probable that many subjects in both groups used individual referents for establishing the issue in perspective with their self-concepts.

Having just completed FMSS, both groups significantly showed change regarding their attitudes for the Fleet Marines in the negative direction. The significant decrease in ego-involvement probably indicates that they wished to avoid the issue as a part of their immediate concern. The nonsignificant ego-involvement results for the All Others group appears to demonstrate that many of the experienced Navy men are ego-involved with the issue and dislike being made to join the Marines.

The significant negative attitude change for the HCS group regarding the issue of Respect with a concomitant decrease in ego-involvement indicates that the HCS group probably does not consider such respect as important to their self-concepts and that they do not wish to identify with the "Marine Corpsman" reference group.

For the All Others group, the nonsignficiant attitude direction change for the issue, Respect, probably indicates that some of the group feel loyalty to the reference group, "Corpsman." However, the ego-involvement significantly decreases and this very likely means for those who do identify with the Corpsman group, that there is not so strong an identification as existed before having encountered FMSS.

Both groups yielded significantly negative attitude change results with nonsignificant ego-involvement direction changes for the issue Navy Career. The HCS subjects apparently regard pursuing a Navy career as a "Marine Corpsman" with personal dislike and many subjects are concerned about this matter as it pertains to their possible futures. The All Others group of subjects do not appreciate their new assignment and

therefore regard the Navy unfavorably for a career, if they must become "Marine Corpsman." Many individuals indicated positive change in ego-involvement within this group and hence perceive the matter as important to their self-concepts.

For the HCS subjects, attitude changes in the negative direction did not occur significantly, nor did the ego-involvement changes decrease significantly for the issue concerning Acceptance. This probably demonstrates that some of the subjects feel that it is important to their self-concepts to be approved or accepted by those with whom they work regardless of the nature of their job and fellow workers. In contrast to this result, the All Others subjects responded with significantly negative attitude changes and with concomitant decrease in ego-involvement after FMSS. These findings probably mean that the older more Navy-experienced group members consider such an issue unimportant to their self-concepts and that the new assignment is with a group that they consider unfavorably with regard to identification.

These results, comparing the prior duty station groups, reveal that certain attitudes do differ for each group and that some attitudes are the same. However, there is reason to believe that these results are due to different references for judgment, in most cases, even though related in complex ways to the training experienced by both groups.

Table 7 shows the significance levels for tests on predicting attitude direction change as a function of initial responses to the survey instrument.

In every case for the validation and cross-validation groups as well as for the groups of Companies A and B versus C and D, and HCS versus All Others, the results were significant. Therefore, for large N counts regarding these groups, the Sherif Method of predicting direction of attitude change as a function of initial response to the Method of Ordered Alternatives has demonstrated to perform a remarkable accomplishment in predicting the direction of attitude change.

The alpha levels were nonsignificant for the following issues by companies:

		Alpha
Company A:		
Issue:	Helping Others (Work)	.1326
	Respect	.0722
	Navy Career	.2799
Company B:		
Issue:	Acceptance	.3416
Company C:		
Issue:	Fleet Marine	.2979
	Respect	.0929
Company D:		
Issue:	Navy Career	.2722

Only one issue held significant results for all four companies: Save Lives. Each of the other five issues appeared with nonsignificant results in at least one company. Although, the issue Respect was nonsignificant in

both Companies A and C, the significance levels were both above .10.

The explanation for the above nonsignificant results is that the number of subjects who actually changed direction for any given issue was much smaller than the total number of subjects in the company to which they were attached. Therefore, the N for a given calculation was often too small for the purposes of a predictive study when considering the companies separately.

Conclusions from Discussion

Ordinarily, Sherif's studies have found that significant changes in attitudes are accompanied by increases in ego-involvements with these attitudes. However, the nature of the situation being studied is dramatically in contrast to those from which his findings were derived. The conditions of the situation were specified in keeping with his theoretical approach, and the results must be considered as further support for that approach.

Several conclusions emerge from this study that should serve to encourage extending the research efforts in the field of attitude psychology. First, there is merit to the instrument and theoretical approach supporting it. Where conditions for susceptibility to attitude change were specifiable, predicted results followed accurately. Second, the attitude direction and ego-involvement changes with respect to the created issues were shown to be significantly a function of a behavioral situation. From the results, the negative attitude change was clearly the product of subjects learning

more about what was expected of them as Marine corpsmen. The rigor of training and the specification of knowledge concerning their new duties were responsible for two reactions. The first was observed to occur in discussions by small groups of subjects and may be designated as the cynical indifference reaction. This reaction prevails where a situation is very unpleasant but has an inherent avoidability characteristic. For Companies A and B the unpleasantness was the rigorous training of daily events. The inherent avoidability that was characteristic of the situation for Companies A and B was afforded by drill instructors whose actual treatment of students was not designed to continuously harass. The second reaction may be designated verbal denigrative reaction. This was most prevalent in Company D and the experimental evidence supporting the reported information is that ego-involvement change with most issues for Company D was not significantly negative. Verbal remarks were made which demonstrated an active and ego-involving dislike for the FMSS training situation for many of the subjects.

Drill instructors attitudes and delivery of material for instruction have been shown to have definite effects on the attitudes with which their students react. This may have an ultimate effect on such variables as morale and motivation over an even longer period of time. The two additional reactions are perhaps general for training situations where military training preparations are made. There is a need for further investigation using other training groups in order to validate such a conclusion.

Education level was shown to have some effect on attitude changes

occurring in this experimental environment. The conclusion was that the company having the highest average education level produced results indicative of more rapid adaptation qualities than did those companies whose average education levels were lower.

From the differences between HCS versus All Others, there is evidence to support the notion that corpsmen experience prior to FMSS training has an effect on the attitude changes and ego-involvement changes with issues related to the new training and to major shifts in assignment. Although there was a tendency for the HCS group to have a higher average education level, there was no confirmation of the adaptation conclusion made from results obtained from Company C. However, the alpha level perhaps did not warrant categorizing the HCS group as having a meaningfully higher average education level than the All Others group.

For large numbers of subjects, the direction of attitude change can be predicted very significantly where change does occur, by the Sherif Method of Ordered Alternatives. This instrument has shown considerable ability to accomplish this predictive objective as a function of initial responses to its first administration for a given group.

Thus, the findings from this study represent a modest but definite step with respect to attitude psychology and support the further application of an already valuable instrument for attitude investigation. Furthermore, the evidence, that the particular attitudinal reactions found are products of group training situations, should encourage additional specification of condition studies in order to determine the more molecular reasons for such behavioral results.

CHAPTER V

SUMMARY

Navy hospital corpsmen are utilized by the Marine Corps for field medical support. In order for corpsmen to perform these duties they are trained by Marine Corps personnel at Field Medical Service Schools. The effects of this training on the attitudes of Navy corpsmen toward the corpsman image and his work had not been investigated previous to this research endeavor.

Six issues were created with the corpsman and Field Medical Service School training especially in mind. The issues were entitled:

(1) Save Lives
(2) Work (Helping Others)
(3) Fleet Marines
(4) Respect
(5) Navy Careers
(6) Acceptance

The Sherif Method of Ordered Alternatives was chosen as the instrument to measure attitude changes. This technique provides both a capability for discriminating attitude changes and also a measure of ego-involvement as defined by Sherif in terms of a subject's latitude of rejection. Measures of change were obtained by administering the survey instrument before and again after the training at Field Medical Service School.

It was hypothesized that attitudes toward the following issues would

change negatively as a function of the training:

(1) Save Lives
(2) Fleet Marines
(3) Navy Careers
(4) Acceptance

This prediction was based on the Sherif specification of conditions for attitude change susceptibility. Attitudes concerning the two remaining issues were hypothesized to change slightly in the positive direction, but, dependent upon individual perception for objects of reference.

It was also hypothesized that subjects would become less ego-involved with the issues as a function of the training. Subjects were observed to become defensive and avoidance oriented with regard to these issues relative to their self-concepts, thus, decreased ego-involvement should be anticipated.

A final set of hypotheses concerned prediction of attitude direction change as a function of initial responses made by subjects to the survey instrument. These hypotheses were based on distribution symmetry of acceptable positions about a most acceptable position and relative positioning of most objectionable positions where the distribution of other acceptable positions was symmetrical about the most acceptable position.

A class consisting of 337 students was divided into four companies from which validation and cross-validation groups were randomly selected. In order to ascertain whether or not test-retest effects occurred, an additional class was tested at the end of its training. This class included 161 students.

Results were considered for three additional group comparisons:

(1) Training groups: Companies A and B versus Companies C and D
(2) Company groups: A, B, C, and D
(3) Prior duty stations groups: Hospital Corps School versus All Others.

Attitude changes and ego-involvement changes were analyzed by the Wilcoxon Matched-Pairs Signed-Ranks Test. Data from the initial responses made to the Survey Instrument as predictive of direction change on the second administration were analyzed by the large sample Binomial Test.

The results indicated that no discernible test-retest effect occurred as measured by modes and medians of responses over the six issues for the given administrations. Three of the hypothesized issues cross-validated significantly with negative attitude change:

(1) Save Lives
(2) Fleet Marines
(3) Navy Careers

The Acceptance issue was significantly negative in the cross-validation group but was not significant in the validation group. The attitude changes toward Work (Helping Others) and Respect were not significant with regard to direction of change in either group. This indicates that a number of subjects did change their attitudes in the positive direction. These results were very likely a function of shifted objects of reference for the subjects.

Consistent with the second major hypothesis, ego-involvements were generally found to decrease with respect to overall direction change. Cross-validating significantly for decreased ego-involvement were the

alphas of the issues concerning Respect and Acceptance. For all issues the possible reorientation shifts were discussed. Also, constituent groups for the validation and cross-validation groups were examined to account for the apparent inconsistency. The results for the other group comparisons were obtained and discussed appropriately.

The results, with respect to the third major set of hypotheses, demonstrated excellent prediction of attitude direction change for all groups with large N counts. The results at the company level did not demonstrate the high levels of significance due to the number of subjects who actually changed in attitude being too small for predictive purposes.

Principal conclusions from this research were:

(1) The merit of the instrument used in demonstrating attitude change was clearly enhanced.

(2) Where conditions for susceptibility to attitude change were specifiable, predicted results followed accurately.

(3) Attitude direction and ego-involvement changes with respect to the issues were significantly a function of the behavioral training situation.

(4) Two reactions to the rigorous training emerged:

(a) Cynical indifference prevailed where the situation was unpleasant but was perceived to be avoidable.

(b) Verbal denigration prevailed where the situation was perceived as unpleasant and unavoidable.

(5) The general trend in support of the hypotheses was that attitudes changed negatively, that ego-involvement with the issues tended to

decrease, and prediction of attitude direction change as a function of initial responses was found to be very successful for groups with large N counts.

Future attitude investigation is encouraged to:

(1) Explore the relationship of education to adaptation for severe environments,

(2) Specify further the conditions for attitude prediction with similar groups,

(3) Determine what attitudinal reactions for other training groups can be isolated.

REFERENCES

Brehm, J. W. Attitudinal consequences of commitment to unpleasant behavior. Journal of Abnormal Social Psychology, 1960, 60, 379-383.

Cohen, A. R. Attitude change and social influence. New York: Basic Books, 1964.

Guilford, J. P. Fundamental statistics in psychology and education. New York: McGraw-Hill, 1950.

Gunderson, E. K. Adaptation to extreme environments: Prediction of performance. U. S. Navy Medical Neuropsychiatric Research Unit, San Diego, California, Report Number 66-17, 1966.

Guttman, L. The problem of attitude and opinion measurement; The basis of scalogram analysis. In S. A. Stouffer et al (Ed), Measurement and prediction: Studies in social psychology in World War II. Vol. 4 Princeton, Princeton University Press, 1950, 46-90.

Hovland, C. I., Harvey, O. J., & Sherif, M. Assimilation and contrast effects in communication and attitude change. Journal of Abnormal Social Psychology, 1957, 55, 242-252.

Janis, I. L., & King, B. T. The influence of role-playing on opinion change. Journal of Abnormal Social Psychology, 1954, 49, 211-218.

McNemar, O. Psychological statistics, New York: Wiley, 1962.

Mehling, R. A simple test for measuring intensity of attitudes. Public Opinion Quarterly, 1959, 23, 576-578.

Nelson, P. D. & Berry, N. H. Attitudes of marines during first enlistment. U. S. Navy Medical Neuropsychiatric Research Unit, San Diego, California, Report Number 66-21, (undated).

Newcomb, T. M. Attitude development as a function of reference groups: The Bennington study. In Maccoby, E., Newcomb, T. M. and Hartley, E. L. Readings in Social Psychology. New York: Holt, Rinehart, and Winston, 1958.

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

Sherif, M. Some needed concepts in the study of social attitudes. In J. G. Peatman & E. L. Hartley (Eds.) Festschrift for Gardner Murphy. New York: Harper, 1960, 194-213.

Sherif, M. & Cantril, H. The psychology of ego-involvements. New York: Wiley, 1947.

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

Sherif, M., & Sherif, C. W. Attitude as the individual's own categories: The social judgment-involvement approach to attitude and attitude change. In C. W. Sherif and M. Sherif (Eds.), Attitude, ego-involvement, and change. New York: Wiley, 1967, 105-139.

Sherif, C. W., Sherif, M., & Nebergall, R. E. Attitude and attitude change. Philadelphia: Saunders, 1965.

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

APPENDIXES

APPENDIX A

Answer Sheet

Form: _____ (1) Company Number: _ _ _ _ _ (2-5)

Name: _____ (6-20) _____ (21-30) _____ (31)
Last (6-20) First (21-30) Middle Initial (31)

Service Number: _ _ _ _ _ _ _ (32-38)

Rate: _____ (39-43) Date: _ _ _ _ _ _ (44-49)

EXAMPLE:

Do Not Mark In This Area		Circle Positions Selected
	A. SAVE LIVES	
(50)____	Most acceptable position	1 2 3 4 5 6 7 8 9
____	Other acceptable position(s)	1 2 3 4 5 6 7 8 9
____	Most objectionable position	1 2 3 4 5 6 7 8 9
(53)____	Other objectionable position(s)	
	B. WORK	
(54)____	Most acceptable position	1 2 3 4 5 6 7 8 9
____	Other acceptable position(s)	1 2 3 4 5 6 7 8 9
____	Most objectionable position	1 2 3 4 5 6 7 8 9
(57)____	Other objectionable position(s)	1 2 3 4 5 6 7 8 9
	C. FLEET MARINES	
(58)____	Most acceptable position	1 2 3 4 5 6 7 8 9
____	Other acceptable position(s)	1 2 3 4 5 6 7 8 9
____	Most objectionable position	1 2 3 4 5 6 7 8 9
(61)____	Other objectionable position(s)	1 2 3 4 5 6 7 8 9
	D. RESPECT	
(62)____	Most acceptable position	1 2 3 4 5 6 7 8 9
____	Other acceptable position(s)	1 2 3 4 5 6 7 8 9
____	Most objectionable position	1 2 3 4 5 6 7 8 9
(65)____	Other objectionable position(s)	1 2 3 4 5 6 7 8 9
	E. NAVY CAREERS	
(66)____	Most acceptable position	1 2 3 4 5 6 7 8 9
____	Other acceptable position(s)	1 2 3 4 5 6 7 8 9
____	Most objectionable position	1 2 3 4 5 6 7 8 9
(69)____	Other objectionable position(s)	1 2 3 4 5 6 7 8 9
	F. ACCEPTANCE	
(70)____	Most acceptable position	1 2 3 4 5 6 7 8 9
____	Other acceptable position(s)	1 2 3 4 5 6 7 8 9
____	Most objectionable position	1 2 3 4 5 6 7 8 9
(73)____	Other objectionable position(s)	1 2 3 4 5 6 7 8 9

NAVMEDNPRSCHU/HCS-ATT

APPENDIX A (Continued)

INSTRUCTIONS

There are six pages following this instruction page. Each page concerns a different issue. Every issue is indicated at the top of the page. For example, the first issue is about saving lives. For each of the six pages, check to see that the order is the same as the correspondingly named issues on your answer sheet. RAISE YOUR HAND IF THE ORDER IS INCORRECT, OR IF YOU ARE MISSING ANY PAGES.

Each page of your booklet concerns a different single issue and has nine statements on it. These nine statements are numbered 1 through 9. These statements express various positions on the specific issues.

FOR THE FIRST ISSUE, Saving Lives, READ ALL THE STATEMENTS CAREFULLY

> Now turn to your answer sheet. All answers are to be made on this answer sheet. From the nine statements, choose the one most acceptable statement or position and indicate that statement on your answer sheet by circling its number to the right of the phrase which says most acceptable position. YOU MUST CIRCLE ONLY ONE NUMBER.
>
> Now choose any other statements which are also acceptable and circle the corresponding numbers to the right of the phrase which says other acceptable positions. If there are no other acceptable positions for you, do not circle any additional numbers after this phrase.
>
> Next, re-read the statements and choose that one statement which is most objectionable, i.e., that you like the least of all. Now, circle the corresponding number to the right of the phrase which says most objectionable position. YOU MUST CIRCLE ONLY ONE NUMBER.
>
> Finally, choose any other statements which are also

APPENDIX A (Continued)

objectionable and circle the corresponding numbers to the right of the phrase which says other objectionable positions. If there are no other objectionable positions for you, do not circle any additional numbers.

REMEMBER, YOU MUST CIRCLE ONE MOST ACCEPTABLE AND ONE MOST OBJECTIONABLE POSITION FOR EACH ISSUE.

APPENDIX A (Continued)

A. SAVE LIVES

1. My very greatest desire is to help save lives.

2. On the whole, I have a great desire to help save lives.

3. It seems that I have a desire to help save lives.

4. Although it is hard to decide, I suppose that I have a desire to help save lives.

5. It is hard to decide whether I have a desire to help save lives or not.

6. Although it is hard to decide, I suppose that I don't have much desire to help save lives.

7. It seems that I don't have a desire to help save lives.

8. On the whole, I have no desire to help save lives.

9. I have absolutely no desire whatsoever to help save lives.

APPENDIX A (Continued)

B. WORK

1. It is absolutely essential that I do work that allows me to help others.
2. It is very important that I do work that allows me to help others.
3. It is very satisfying to do work that allows me to help others.
4. It is sometimes satisfying to do work that allows me to help others.
5. It does not matter whether I do work that allows me to help others or not.
6. It is not very satisfying to me to do work that allows me to help others.
7. It is rather difficult for me to do work where I must help others.
8. It is very unpleasant for me to have to do work where I must help others.
9. It is absolutely impossible for me to do work where I must help others.

APPENDIX A (Continued)

C. FLEET MARINES

1. My very greatest desire is to be assigned with the Fleet Marines.
2. I have a great desire to be assigned with the Fleet Marines.
3. It would be fine to be assigned with the Fleet Marines.
4. It would be all right to be assigned with the Fleet Marines.
5. It does not matter to me whether I am assigned with the Fleet Marines or not.
6. It would be a somewhat unsatisfactory assignment to be with the Fleet Marines.
7. It would be a very undesirable assignment to be with the Fleet Marines.
8. It would be an extremely miserable assignment to be with the Fleet Marines.
9. It would be the most dreadful assignment possible to be with the Fleet Marines.

APPENDIX A (Continued)

D. RESPECT

1. Corpsmen are absolutely the most highly respected group of enlisted persons in the Navy.

2. On the whole, corpsmen are very highly respected.

3. It seems that corpsmen are a well-respected group.

4. Although it is hard to decide, corpsmen are probably a fairly well-respected group.

5. It is hard to decide whether corpsmen are respected or not.

6. Although it is hard to decide, corpsmen are probably not too well respected as a group.

7. It seems that corpsmen are not a well-respected group.

8. On a whole, corpsmen are not at all a well-respected group.

9. Corpsmen have absolutely the lowest reputation of all enlisted persons in the Navy.

APPENDIX A (Continued)

E. NAVY CAREER

1. A Navy career offers absolutely the best opportunity to make my life a success.

2. A Navy career offers an excellent opportunity to make my life a success.

3. A Navy career offers a very good opportunity to make my life a success.

4. A Navy career offers a possible way to make my life a success.

5. It is hard to decide whether a Navy career would be a good way to make my life a success or not.

6. A Navy career does not offer a very good way to make my life a success.

7. A Navy career is really not a satisfactory way to make my life a success.

8. A Navy career is a very poor way to try to make my life a success.

9. A Navy career is absolutely the worst of all possible careers that I could choose.

APPENDIX A (Continued)

F. ACCEPTANCE

1. It is of greatest personal importance that I am always accepted by those with whom I work.

2. On the whole it is of very great personal importance that I am accepted by those with whom I work.

3. It seems that it is very important to me to be accepted by those with whom I work.

4. Although it is hard to decide, it is somewhat important to me to be accepted by those with whom I work.

5. It is hard to decide whether acceptance by those with whom I work is important to me or not.

6. Although it is hard to decide, it is somewhat unimportant to me to be accepted by those with whom I work.

7. It seems that it is not important to me to be accepted by those with whom I work.

8. On the whole it is not at all important to me to be accepted by those with whom I work.

9. It is absolutely unnecessary to me to be accepted at any time by those with whom I work.

APPENDIX B

Attitude Change and Ego-Involvement Change Data

Validation Group

Issue	Attitude Change*																Ego-Involvement Change**															
	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8
Save Lives					1	1	5	42	97	19	3											2	11	15	34	75	19	4	2	3			
Work							9	29	91	33	6	0	1									2	6	12	30	80	25	8	5				
Fleet Marines			1	0	5	16	22	27	65	18	8	4	1									1	4	10	35	83	19	4	5	2			
Respect						1	5	33	95	23	10	1										6	7	11	29	77	24	12	0	1			
Navy Career			1	4	5	9	21	34	53	22	11	2	4	0	1							1	4	7	28	84	24	9	3	2	0	1	
Acceptance			1	1	1	4	11	32	72	37	4	2	1	1	0	1				1	2	2	5	12	28	79	22	6	4	2	1		

Cross-Validation Group

Save Lives				2	1	4	11	27	98	16	7	2									2	3	3	10	28	83	17	13	5	1	0	2	
Work				1	0	1	6	24	92	36	7									1	2	4	9	24	98	18	9	1	0	0	2		
Fleet Marines				3	4	9	23	29	58	23	13	3	0	0	2							2	4	11	29	80	25	11	2	2			
Respect				1	2	3	5	28	91	29	5	2								2	2	4	11	32	80	27	6	1	2				
Navy Career		1	3	2	3	10	17	30	61	28	9	2	0	1	1							1	5	6	27	89	24	11	3	1			
Acceptance		1	2	1	3	2	10	34	74	34	3	3								2	2	4	12	30	80	23	6	4	1				

*The attitude change data is in the form of frequency counts of those subjects who changed their most acceptable positions a specific number of positions in either direction.

**The ego-involvement change data is in the form of frequency counts of those subjects who increased or decreased their latitudes of rejection.

APPENDIX B (Continued)

Company A and B

Issue	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8
Save Lives				1	0	5	7	31	99	18	5	1									1	3	6	14	32	86	13	6	3	3				
Work						1	7	25	99	32	3	0	1									3	5	9	34	89	18	6	3					
Fleet Marines			1	1	6	12	23	25	59	23	10	4	1	0	2							2	5	9	40	83	19	6						
Respect					1	2	3	31	83	36	10	1										5	6	11	37	80	20	6	0	1				
Navy Career			3	4	5	9	17	34	58	25	10	1	1	1									8	5	27	98	18	8	1					
Acceptance			2	1	3	3	11	31	73	37	4	2									3	2	5	11	31	90	18	1	4					

Company C and D

Save Lives				1	2	0	9	38	95	17	5	1									1	2	8	11	30	73	23	11	4	1	0	2	
Work				1	0	0	8	28	84	37	10										1	1	5	12	20	89	25	11	3	0	0	1	
Fleet Marines				1	3	13	22	31	63	18	11	3										1	3	12	24	80	25	9	6	4				
Respect					1	2	7	30	99	16	5	2									2	3	5	11	28	77	26	12	1	2				
Navy Career	1	1	2	4	10	21	30	56	25	10	3	3	0	1								2	1	8	28	75	30	12	5	3	0	1		
Acceptance	1	1	1	1	3	10	35	73	34	3	3	1	1					1	1	2	4	13	27	70	27	11	4	2	1					

Hospital Corps School

Save Lives					1	2	5	32	91	16	3										2	1	9	12	26	68	14	10	2	4	0	1	
Work						1	8	25	85	25	6											2	4	12	24	76	19	9	4					
Fleet Marines		1	2	5	13	25	29	53	16	3	1	0	0	1								2	3	14	34	61	22	6	3	3				
Respect					1	2	8	32	80	21	3	2									2	3	6	12	30	67	18	8	1	2				
Navy Career		2	4	4	9	19	26	55	17	8	2	2	0	1									1	5	9	25	65	27	10	3	2	0	1	
Acceptance			0	3	0	10	31	64	31	2	3	1	1	0	0	1			1	3	2	2	12	27	60	25	8	3	3	1				

APPENDIX B (Continued)

All Others

Issue	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8
Save Lives				2	1	3	11	37	99	19	7	2										4	5	13	36	90	22	7	5	0	0	1		
Work				1	0	0	7	28	98	44	7	0	1								1	2	6	9	30	99	24	8	2	0	0	2		
Fleet Marines				1	4	12	20	27	70	25	18	6	1	0	1							1	5	7	30	99	22	9	4	1				
Respect				1	1	2	2	29	99	31	12	1										5	5	10	35	90	28	10	0	1				
Navy Career	1		2	2	5	10	19	38	59	33	12	2	2	1	1							1	4	4	30	99	21	10	3	1				
Acceptance			2	2	1	6	11	35	82	40	5	2									1	2	7	12	31	99	20	4	5					

Company A

Save Lives						1	3	16	38	7	5											3	3	5	15	36	3	3	1	1				
Work						1	4	10	42	12	1											2	3	3	14	41	2	3	2	0	0	1		
Fleet Marines					3	8	10	11	24	7	5	1											2	1	17	40	7	1						
Respect				1	0	2	0	13	33	14	6	1										3	3	4	13	41	5	0	0	1				
Navy Career		1	2	2	4	6	19	24	8	3	0	1	0	1									4	2	8	45	8	3						
Acceptance		1	0	2	1	7	12	30	16	1	1										1	2	3	3	8	42	9	0	0	1				

Company B

Save Lives				1	0	4	4	15	62	11	0	1									1	0	3	9	17	50	10	3	2	2				
Work							3	15	57	20	2	0	1									1	2	6	20	48	16	3	1					
Fleet Marines		1	1	3	4	13	14	35	16	5	3	1	0	2								2	3	8	23	43	12	5						
Respect				1	0	2	18	50	22	4												2	3	7	24	39	15	6						
Navy Career		2	2	3	5	11	15	34	17	7	1	0	1										4	3	19	53	10	5	1					
Acceptance		1	1	1	2	4	19	43	21	3	1										2	0	2	8	23	48	9	1	4					

APPENDIX B (Continued)

Company C

Issue	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8
Save Lives					1	0	1	13	41	9	2	1											3	7	17	27	10	4						
Work							3	12	32	17	4										1	0	1	5	10	35	11	3	2					
Fleet Marines				1	0	4	8	9	35	4	4	2											1	6	10	29	14	3	2	2				
Respect					1	0	3	12	40	9	2	1										1	1	5	15	31	10	3	1	1				
Navy Career				1	0	0	9	14	25	10	5	1	2										1	4	10	32	14	5	0	1				
Acceptance						1	5	13	33	12	1	2	1							1	0	0	1	3	16	27	12	4	2	1				

Company D

Save Lives				1	1	0	8	25	54	8	3										1	2	5	4	13	46	13	7	4	1	0	1	
Work				1	0	0	5	16	52	20	6											1	4	7	10	54	14	8	1	0	0	1	
Fleet Marines				1	3	9	14	22	28	14	7	1										1	2	6	14	51	11	6	4	2				
Respect						2	4	18	64	7	3	1									2	2	4	6	13	46	16	9	0	1				
Navy Career	1	1	1	4	10	12	16	31	15	5	2	1	0	1								2	0	4	18	43	16	7	5	2	0	1		
Acceptance	1	1	1	1	2	5	22	40	22	2	1	0	1								1	2	3	10	11	43	15	7	2	1	1			

APPENDIX B (Continued)

Incorrect Predictions (X) and Actual Number (N) Who Changed: Data for Prediction of Attitude Change as a Function of Initial Response to the Survey Instrument

	Validation Group		Cross-Validation Group	
Issue	X+.5	N	X+.5	N
Save Lives	14.5	71	20.5	70
Work	21.5	78	26.5	76
Fleet Marines	30.5	103	41.5	108
Respect	20.5	73	25.5	75
Navy Career	43.5	115	41.5	105
Acceptance	35.5	95	36.5	94
	Cos.' A & B		Cos.' C & D	
Save Lives	18.5	68	16.5	73
Work	23.5	70	24.5	84
Fleet Marines	32.5	107	39.5	104
Respect	25.5	85	20.5	63
Navy Career	39.5	111	45.5	109
Acceptance	38.5	95	33.5	94
	HCS		All Others	
Save Lives	14.5	59	20.5	82
Work	18.5	65	29.5	89
Fleet Marines	25.5	95	46.5	116
Respect	20.5	69	25.5	79
Navy Career	32.5	93	52.5	127
Acceptance	31.5	84	40.5	105
	Co. A		Co. B	
Save Lives	7.5	32	11.5	36
Work	11.5	29	12.5	41
Fleet Marines	16.5	44	16.5	63
Respect	14.5	38	11.5	47
Navy Career	21.5	47	18.5	64
Acceptance	13.5	41	25.5	54

APPENDIX B (Continued)

	Co. C		Co. D	
Save Lives	5.5	27	11.5	46
Work	10.5	36	14.5	48
Fleet Marines	14.5	32	25.5	72
Respect	10.5	28	10.5	35
Navy Career	14.5	41	31.5	68
Acceptance	10.5	34	23.5	60

APPENDIX B (Continued)

Data for Comparing Groups for Age and Education Level

Groups	(M_1) Mean of first group to be compared	(M_2) Mean of second group to be compared	$\Sigma f(X-M_1)^2$	$\Sigma f(X-M_2)^2$	N_1	N_2
Validation versus Cross-Validation (Age)	20.74	20.94	657.5	796.6	167	168
Validation versus Cross-Validation (Ed. lev.)	12.53	12.59	255.6	186.3	167	167
Validation versus Class 6806 (Age)	20.74	23.17	657.5	3877.2	167	163
Validation versus Class 6806 (Ed. lev.)	12.53	12.62	255.6	306.1	167	163
Companies A & B versus C & D (Age)	20.72	20.59	941.7	522.6	169	168
Companies A & B versus C & D (Ed. lev.)	12.51	12.61	218.2	223.3	169	166
Company B versus Company C (Age)	21.13	20.35	684.9	159.5	98	68
Company B versus Company C (Ed. lev.)	12.44	12.75	104.2	100.6	98	67
Prior Duty Stations: HCS versus All Others (Age)	19.91	21.49	304.9	953.7	138	199
Prior Duty Stations: HCS versus All Others (Ed. lev.)	12.66	12.49	229.2	211.2	139	197