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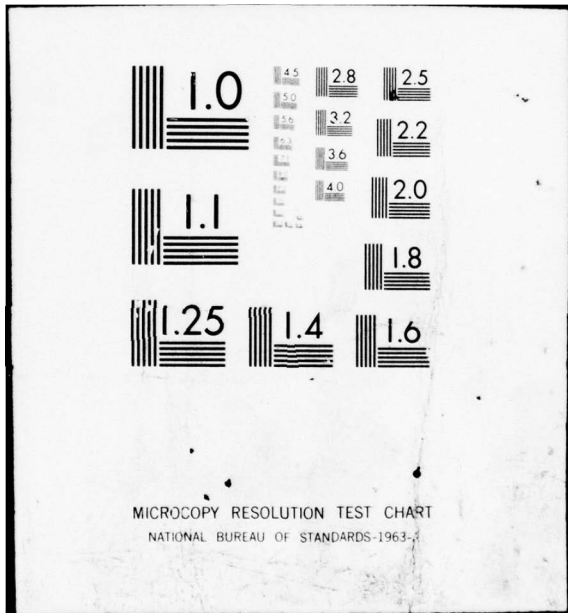
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IN A MILITARY SITUATION

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Report of Research Commissioned by
The George Washington University
Human Resources Research Office
Division of Motivation and Morale

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To Paul D. Guernsey for his genuine appreciation of the value of research in general, and its special role in the human aspects of military effectiveness.

Without his aid this study could not have been made.

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→ certain methodological problems of attitude measurement posed, in part, by the development and application of Guttman's scaling methods.

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NATIONAL OPINION RESEARCH CENTER
University of Chicago

6 May 1953

LETTER OF TRANSMITTAL

Dr. Meredith P. Crawford, Director
Human Resources Research Office
George Washington University
Washington, D. C.

My dear Sir:

On 7 February 1952, National Opinion Research Center was commissioned by The George Washington University* to carry out, under the general guidance and direction of the Human Resources Research Office, a re-study of certain attitude data collected originally from soldiers during World War II by the Research Branch of the Information and Education Division of the War Department. The purpose of the study was two-fold:

1. To investigate basic relationships between attitudinal intensity and personality characteristics of soldiers; and
2. To investigate certain methodological problems of attitude measurement posed, in part, by the development and application of Guttman's scaling methods.

The following report presents the findings from this study. The report was prepared by Mr. Jack Elinson, a senior study director on the Center's research staff.

It seems to me that the importance of Mr. Elinson's study lies chiefly in its bearing on the problem of attitude change. The effort to produce change, or to control it, succeeds, except by accident, in the human realm as in all other realms, only if the effort is based upon understanding of the phenomena with which it is concerned. Thus, knowledge of the distribution of an attitude within a group that must act in a coordinated and cooperative way, useful as such knowledge is in pointing up problems of control, does not indicate how control can be achieved; nor does knowledge of the varying intensity with which these attitudes are held by persons at different points in such a distribution. Plotting attitudinal intensity against attitudinal position within a group whose members have different attitudes toward any relevant object--group objectives, group leadership, social arrangements within the group, or external elements in the group situation, for example--certainly provides a more precise definition of a situation that is problematical because of the obstructive attitudes of the people involved in it than would otherwise be available. But knowledge that goes considerably beyond, or penetrates much more deeply than, such descriptive generalizations is needed if efforts to modify the obstructive attitudes are to succeed.

*Subcontract No. HumRRO 650-003 (95-65-2-52-3) dated 7 February 1952 and as amended by Modification A, dated 6 January 1953.

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The commanding officer of a military unit, like any leader of an active group, is persistently up against the problem of modifying attitudes that impede effective group action. He needs to know, of course, what these attitudes are, who holds them, and the degree of tenacity with which they are held. But he also needs to know why the different group members feel as they do and why the differences in the intensity of their feelings. It is just these "why" questions with which this study was first concerned: what factors or combination of factors account for observed variations in the intensity with which persons occupying substantially the same position on an attitude score hold their attitudes? Answers were sought by examining the relation between variations in attitudinal intensity and basic personality differences among the individuals, on the one hand, and differences in status relationships within the immediate group, on the other. The results, though tentative and inconclusive, have important affirmative theoretical and practical implications. They are certainly sufficiently impressive to warrant further research on less limited bodies of data and with more refined measuring devices than were available at the time the data used here were collected.

Incidentally, in this connection, a valuable by-product of Mr. Elinson's study is the suggestion of a technique which will enable an investigator to establish the distance between attitudinal positions in psychologically meaningful terms. Building upon the notion of the zero-point in attitudinal analysis developed by Suchman and Guttman during World War II, scales of intensity were utilized to calibrate attitudinal positions in reference to this zero point. This tentatively suggested extension of scale methods, if it stands up under further experimental testing, could prove to be of considerable administrative and research utility.

Bearing also on the problem of attitude change, is another suggestion growing out of Mr. Elinson's research,--namely, that it is an oversimplification to think of extreme attitudes as being uniformly characterized by high intensity and, therefore, difficult to change. Useful as the intensity curve is, as a means of separating those with favorable attitudes from those with unfavorable attitudes by establishing a zero-point that is independent of question-wording, it tends to obscure many important facts about men's attitudes as actually observed if attention is limited to those cases which fall on or near the curve. Many men who hold relatively temperate opinions about their officers were found to hold these opinions quite firmly, whereas both the "disgruntled" and the "boot-licker," who occupy the two extreme positions on the scale of enlisted men's attitudes toward their officers, do not in many cases feel at all strongly about their positions.

These and other tentative conclusions presented in this report lend further support to the findings from other studies among both civilian and military populations that superficial, piecemeal efforts to change attitudes in a desired direction are likely to have severely limited effects. They suggest, also, some refinements of available techniques for detecting, measuring, and analyzing attitudes and, thus, for gauging the effectiveness of experimental procedures designed to modify attitudes.

The study was conceived and directed throughout by Mr. Elinson. Miss Patricia Collette, a National Opinion Research Center assistant study director, aided in the detailed analysis and in the interpretation of results. Mr. Jacob J. Feldman, Dr. Eli S. Marks, and other members of National Opinion Research

Center's senior research staff advised Mr. Elinson at many points in the course of the analysis. Many members of the Center's technical, secretarial, and clerical staff helped with the processing of the data and the preparation of the report.

In addition to those mentioned above, numerous persons have contributed, wittingly or unwittingly, to the shaping of the problem with which this study is concerned, and to the development of ways of attacking it. First among these, of course, are Dr. Samuel A. Stouffer, Dr. Edward A. Suchman, Dr. Louis Guttman and their colleagues in the War Department who contributed immeasurably to the development of attitude and opinion research through their studies of the American Soldier during World War II. Then, for their advice and criticism in connection with many aspects of this study, indebtedness is acknowledged to Dr. Eugene A. Cogan, Dr. John L. Finan, and Mr. Ira H. Cisin, of the Human Resources Research Office, and to Dr. Curtis E. Tuthill, Department of Psychology, George Washington University. Finally, a special debt of gratitude is due to the late Col. Paul D. Guernsey, formerly Chief of the Attitude Research Branch, Armed Forces Information and Education Division, Department of Defense, for transferring to the Center a set of the source materials used in this study; and to various members of Col. Guernsey's staff for their assistance in securing easy access to source materials, especially to Mrs. Celia L. Gibeaux, Miss Martha Setzer, and Mrs. Elsie A. Gray.

Respectfully yours,

Clyde W. Hart

Clyde W. Hart
Director

ATTITUDINAL INTENSITY IN RELATION TO PERSONALITY AND STATUS
IN A MILITARY SITUATION

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INTRODUCTION

As he burnt the Alexandrine library, the Caliph Omar is reputed to have said: "All books which contain what is not in the Koran are dangerous; all those which contain what is in the Koran are useless." We are advised that probably no one ever had an intenser belief in anything than Omar had in this; at the same time we are admonished that it is impossible to imagine it preceded by rational argument.

The Caliph's state of mind is used to illustrate a 19th century thinker's observation in 1871 that: "Probably, when the subject is thoroughly examined, 'conviction' will be proved to be one of the intensest of human emotions, and one most closely connected with the bodily state."

According to Bagehot (3):

A hot flash seems to burn across the brain. Men in these intense states of mind have altered all history, changed for better or worse the creed of myriads, and desolated or redeemed provinces for ages. Nor is this intensity a sign of truth, for it is precisely strongest in those points in which men differ most from each other. John Knox felt it in his anti-Catholicism; Ignatius Loyola in his anti-Protestantism; and both, I suppose, felt it as much as it is possible to feel it.

It is a curious fact then that in the past thirty years of concentrated opinion-attitude research, studies of intensity of opinion have been systematically avoided and neglected. The strangeness of this fact appears even more remarkable in the face of the importance even currently attributed to intensity as a facet of opinion by the most concerned triumvirate: social psychologists, political scientists, and practitioners of the art of social persuasion.

Thus, as a social psychologist, Cantril (4) declares that: "A knowledge of the intensity of attitudes as well as their direction gives a more

accurate and reliable index of the composition of public opinion than measurement of direction alone."

So also, B. H. Williams, (70) as a political scientist, in estimating the role of public opinion in international affairs, points up categories of intensity of belief by emphasizing the need to differentiate among people who will merely acquiesce in a principle, who will give it rhetorical support for the purpose of convincing others, and who are willing to make personal sacrifices in its behalf.

In the world of practical affairs, the story is told of a political observer, returning from a trip through the middle west, prior to our entry into World War II, who noted that: "The public opinion polls show that the country is 70 per cent in favor of the Allies, but I can tell them that this sentiment doesn't go a half inch deep (39)."

Practical politicians' intuitive distrust of opinion polls is probably based not only on an ignorance of modern statistical sampling theory applied to human populations, but also on a sub-clinical assessment derived from frequent determinations of the sort: "I know he said it--but he doesn't really mean it." Among researchers, practitioners, and critics alike no dissenting voice is ever raised with respect to the need and significance of ascertaining degree of intensity in the study of opinion. Yet apparently withstanding sporadic professional observation and frequent lay criticism, the current plethora of opinion polls and attitude surveys pays amazingly scant attention to the degree of conviction with which opinions are expressed or attitudes maintained.

Why this discrepancy between alleged importance of attitudinal or opinion intensity and the relatively small number of studies which have been devoted to it? A number of guesses may be hazarded. Perhaps the most cogent one for social psychologists is the rather general failure to distinguish between direction and intensity as two distinct, independently measurable,

aspects of expressed attitude or opinion. This failure frequently results in the extremeness of position on an attitudinal continuum being confused with strength or intensity of opinion. For example, in a relatively recent review of survey research methodology we find the author (52) beginning a discussion of attitude scale construction in the following terms:

The data obtained in public opinion and attitude surveys may be used: "... to measure the strength of the attitude of each individual by a series of questions (as opposed to a single question) the answers to which are combined into a ... score.... Then the number or percentage of people holding attitudes of varying intensity may be ascertained.

A second possible factor contributing to the neglect of intensity as a separate dimension, and incidentally to the confusion between direction and intensity, may have been a result of the introduction of Likert's (43) technique of attitude assessment. Keenly aware of the importance of strength of opinion, but intent upon improving and simplifying attitude measurement after Thurstone had proposed an elaborate application of psychophysical methods, Likert assessed the degree of agreement or disagreement to statements of opinion in terms of graded categories, e.g. "strongly agree," "agree," "undecided," "disagree," "strongly disagree." This compact incorporation of an intensity-measuring device along with a method of ascertaining attitudinal disposition served, it is true, simultaneously to sound both depth and direction, but appears also to have resulted in obscuring the importance of intensity measurement in subsequent researches.

A third diversion from a direct attack upon the measurement of intensity of opinion may have been a consequence of the attempts to organize the structure of attitudes through extensive intercorrelations of assorted attitudinal contents. We hereby label as the complexity error in opinion-attitude research the assumption that by observing correlations among a series of attitudinal content variables--without determination of intensities associated with the contents--we are establishing the importance of the relationships

among the included contents.

It would seem then that involvement in these three otherwise useful developments in attitudinal research: 1) use of more than one question to determine direction or position as in attitude scales, 2) employing graded multichotomous responses rather than dichotomous, and 3) determining inter-correlations among attitude scales, has tended to detract from adequate consideration of the dimension of attitudinal intensity, despite universal acknowledgement or profession of its importance in the understanding of the structure of attitudes.

These three developments represent increasing methodological sophistication in attitude research. A fourth defection from the proper study of the intensity dimension derives from the propensity of many social psychologists to become immediately involved in the quagmire of attitudinal content. Determined to study important problems of the times such social psychologists find themselves confronted with a nearly overwhelming and constantly changing subject matter with the resultant failure to give substantial attention to the instruments with which they make their investigations. Long ago in the history of psychology Titchener (68) despaired of classifying attitudes: "There seems literally to be no end till we have exhausted the resources of the language, to the catalogue of possible attitudes."; and more recently McNemar (47) in his fairly comprehensive outsider's review of opinion-attitude methodology pointed his lean and scornful finger at a task set, or found, by one of Remmers' graduate students "... of building up lists of the multitudinous miscellany about which people can and maybe do have attitudes."

The anomaly of a paucity of investigations into attitudinal intensity is heightened by the fact that pioneering researches in the study of opinion focused on persons who were relatively intense in their opinions. Nearly thirty years ago we find Allport and Hartman (2) setting about to verify experimentally an a priori expectation that persons who hold opinions of an

extreme sort will also express the greatest degree of certainty or intensity. Restricting the scope of their study to seven issues of political controversy (League of Nations, qualifications of President Coolidge, distribution of wealth, legislative control of Supreme Court, prohibition, Ku Klux Klan, and graft in politics) and to the opinions of some 400 Syracuse freshmen on these matters, these two social psychologists concluded that individuals who held extreme opinions on either side of these issues not only were more like each other in the high intensity with which they expressed extreme opinions, but also tended to be more like each other in certain emotional or personality characteristics than they were like moderate individuals whose expressed opinions on these issues were actually closer to theirs.

With the hindsight of nearly thirty years, we have some questions today as to the adequacy of the data on which the conclusions were based. Further, some of the conclusions do not seem to follow from the data. (For example, Allport and Hartman denoted college students who held extreme positions as "atypical," but their own data would indicate that this is mislabeling since on some issues with bimodal distributions the relatively moderate positions were held with considerably less frequency than either of the extremes.) However, our intention at the moment is not to reopen a critique of the methodology, but simply to call attention to the fact that the dimension, intensity of opinion, which has since been more or less lost sight of, was then in this early study, a central point of investigation.

In point of fact, more than a quarter of a century before the Allport and Hartman study, the Psychological Laboratory at Columbia University had turned its attention to an empirical study of certainty of opinion. Using a wide variety of topics--"a sort of shorter catechism of twenty-five articles of faith"--F. B. Sumner (67) asked judges to arrange a series of questions in the order of the certainty with which they felt able to answer them, and

obtained average rankings for each of the questions. The particular questions used have some curiosity value. They are presented below in the order of the average arrangements, having been presented to the judges in order of the key alphabet.

Questions Employed in Sumner's Study of Belief

- D Do two plus two equal four?
- B Are there other human minds besides your own?
- N Did George Washington live?
- V Am I awake at this moment, i.e. not merely dreaming?
- F Is the earth round?
- I Will the sun rise tomorrow?
- H Does the present life alone furnish sufficient motives for moral conduct?
- R Does the moon's attraction cause the tides?
- U Is matter ever created or destroyed?
- L Is the evolution of living beings a fact?
- X Will poetry always be held in high regard by the most cultivated minds?
- A Is the world becoming better?
- P Is man's conduct determined entirely by his heredity and the circumstances of his life?
- O Will the most honest man you know be honest ten years hence?
- Q Is the scientific mind as truly creative as the artistic?
- K Do any landscape paintings yield as much satisfaction as the finest natural scenes?
- Y Would a college education be, on the whole, an advantage to a majority of young men?
- W Do spirits of the departed ever communicate with living persons? (We refer only to modern times.)
- C Would this continent have become as quickly civilized if it had remained colonial?
- J Is a protective tariff a wise policy for the United States?
- E Will the death penalty for murder always be held justifiable among civilized peoples?
- G Will our Republic endure another hundred years?
- M Is there life on other heavenly bodies?
- T Will there be frost in New York City during September next?
- S Is there an even number of persons in New York City?

In 1940, one of the findings of Allport and Hartman was again demonstrated by D. M. Johnson (37). Using more sophisticated techniques, i.e. Thurstone scales of attitude toward war and toward censorship, with 68 undergraduate students in his Long Island University classes, Johnson found what Allport and Hartman had, but stated it in a different way: "... a subject whose attitude score is at one extreme of the scale is likely to find many

statements included in the scale which he can reject with maximum confidence." Johnson's own observations of his data were to the effect that "... confidence on one scale is closely related to confidence on the other even though attitude scores on the two scales are not significantly related."

Johnson offered a new, or different, interpretation. Instead of subscribing to the notion that extremists were intrinsically more confident, or intense, in general, he reasoned that:

... extremists will ordinarily show more confidence in expressing their opinions ... because there are many statements on the attitude scales--and probably in common public discussion--which represent opinions at the opposite extreme from their own opinion and which can thus be rejected with confidence. The troubled middle-of-the-roader finds few statements so far from his own position that he can reject them confidently.

This is an interesting interpretation, but it overlooks the possibility that extremists can vehemently support their own positions as well as vehemently reject all other positions. We find Johnson's study therefore of interest mainly in the question it poses, namely, why attitudinal extremists are so much more confident of their opinions.

Until the World War II period, except for the work of Allport and Hartman and later, D. M. Johnson, academic studies of attitudes tended either to pass over the intensity dimension or to treat it lightly. We find intensity tangentially referred to in some studies of attitude change such as those of Knower (41) and of Ewing (13). For example, Knower studying the effects of oral and printed arguments on attitudes toward prohibition held by college students enrolled in public speaking courses, found that: "Subjects who reported an interest in prohibition were more inclined to take an extreme position and less inclined to change than were subjects who reported indifference." It is not possible to tell from the data presented by Knower whether the disinclination to change was primarily the result of original extreme position or interest in the topic. Again, this sort of conclusion

typifies the way in which intensity and direction have been blended in the conception of attitude.

Ewing, studying factors involved in changes of opinion about Henry Ford, radicals, intelligence of Negroes and capital punishment, expressed by college students enrolled in introductory courses in psychology, confirmed Knower's finding of the negative relationship between report of considerable interest and change of opinion. Under the assumption that "such reports mean that the material under consideration is more closely related to personal values and accepted standards," Ewing thinks therefore that greater resistance to the propagandist is to be expected from interested and informed subjects. Ewing reports, as have others before him, the relationship between atypicality of reaction to a list of socio-political stereotypes and certainty of opinion. As in the Knower study, we are thrown back once more to the position of not really knowing whether resistance to change is a function of attitudinal extremeness or interestedness or both.

As a rather elaborate example of the confounding of attitudinal intensity with direction we cite a study by Riker (55). Like McGregor (49) and also Likert (46) before him, Riker set out to compare certain alternate methods used in attitude research. Riker chose to compare Thurstone-type scales with two simple self-rating scales--one graphic, by which an individual rates **himself along** a segmented line labeled only at the ends as "extremely in favor" and "extremely opposed"; the other an eleven-point verbal self-rating scale embracing the intensity dimension along with indication of attitudinal position. The model for Riker's scale is the following:

----- Very intense feelings pro-X
----- Intense feeling pro-X
----- Strong feeling pro-X
----- Moderate concern pro-X
----- Slight feeling pro-X
----- Don't care
----- Slight feeling anti-X
----- Moderate concern anti-X
----- Strong feeling anti-X
----- Intense feeling anti-X
----- Very intense feeling anti-X

Riker, using college undergraduates as subjects, found his simple rating scales to correlate reasonably well and to yield distributions similar to Thurstone-type scales. The "X" in the above model represented the following social issues: the Negro, Germans, treatment of criminals, capital punishment, evolution and communism. That it might be possible for persons to maintain a moderate attitudinal position accompanied by considerable strength of feeling or an extreme position with only mild intensity is not envisaged, at any rate not allowed for, by Riker.

It is rather amazing that the greatest progress toward the study and use of attitudinal intensity has thus far been made outside the academic laboratories. A seemingly complex subject and apparently requiring the microscopic examination possible only in tightly controlled laboratory situations, attitudinal intensity has nevertheless been most successfully attacked in the hurly-burly of wartime morale research in the armed forces and has received the most extensive, if cursory, application in everyday public opinion polls. The attention which intensity has received in the polls is exemplified by the list of intensity-measuring devices compiled by Katz (39) and reported in Cantril's "Gauging Public Opinion." Drawing his illustrations from the work of the American Institute of Public Opinion, Katz describes the following techniques tried out by the polls prior to 1944:

- (1) rating by the interviewer of the strength of the respondent's feelings as judged by the respondent's tone of voice, comments and general attitude
- (2) the self-rating of the respondent as to whether he felt strongly or mildly about the question
- (3) the self-rating of the respondent on a graphic thermometer

An analysis attributed to Perry of the American Institute of Public Opinion showed that there was "a consistent, though not always pronounced tendency for the respondent to give himself a more extreme rating than the interviewer would give him." Further analysis by Princeton's Office of Public Opinion Research revealed no conclusive evidence that either device was more

effective than the other; and that "both self-and interviewer's ratings are effective in differentiating intensity groups."

Katz briefly describes "an experiment to compare the effectiveness of various intensity devices in the same test situation" carried out in the metropolitan area of New York and its environs. Twenty experienced interviewers from commercial and research polling organizations interviewed 1918 respondents in a week's time on national and international affairs. Of the seven intensity devices used in this experiment, four (the first four listed below) were controlled in a systematic way to give comparable results; three were appended as supplementary.

"The four devices receiving major consideration were:

- (1) A verbal self-rating of strength of feeling. (How strongly do you feel about this question?) ___ Very strongly; ___ Fairly strongly; ___ Don't care.
- (2) A thermometer or self-rating on a graphic numerical scale.
- (3) A four-step logical scale setting forth the main alternatives on the issue.
- (4) A verbal self-rating on certainty, on sureness of the correctness of one's opinion. (How sure are you that your opinion is right? ___ Not sure; ___ Fairly sure; ___ Very sure)"

"The three supplementary devices were:

- (5) The interviewer's rating of the strength of the respondent's attitude.
- (6) The respondent's self-rating of his degree of personal involvement. (How much does this question mean to you personally? ___ Means very little to me personally; ___ Means something to me personally; ___ Means a great deal to me personally.)
- (7) The length of time the respondent has been of his opinion. (When did you make up your mind about this question? ___ Just now when you were being asked; ___ Within the past few days; ___ Within the past few months; ___ Have thought this way for a long time.)"

Using as his criterion the extent to which an intensity device predicted a respondent's answers to related questions, Katz concludes from his experiment that "... the sureness of rating and the thermometer stood out clearly as the most effective devices," but that "it seems unlikely that we

shall ever have an instrument that will work equally well for all types of questions."

Katz's experiment is fairly neat [notwithstanding McNemar's dissatisfaction with Katz's method of presentation of results (50)] and contributes to our knowledge of the practicability as well as efficacy of using various intensity measuring devices in the ordinary public opinion polling situation. It is interesting to note however that the confusion between intensity and direction of opinion lingers on in Katz, despite the pains he has taken to point out how necessary it is for both understanding and prediction to have a knowledge of the intensity of an opinion as well as its direction. In this instance, the jumbling of intensity and direction takes place in the listing of a "four-step logical scale setting forth the main alternatives on the issue" as a measure of intensity rather than as an index of direction.

The clearest separation between direction and intensity of opinion of attitude is made by Cantril (4) with reference to public opinion research, and by Suchman and Guttman (66) with reference to morale attitude research in the armed forces.

Cantril describes the application of a single intensity question when associated with a single opinion question on two issues of public interest: the Negro problem and government regulation of business. The opinion questions used by Cantril were made up of a query with four or five statements provided as possible answers. These statements had previously been "rated by 80 judges on a 10 to 0 scale as to the place each statement should occupy on an attitude continuum ranging from most favorable to most unfavorable." (The comment may as well be offered here as later that determination of the scalability of the statements appears to be entirely a priori based on inspection of the content; no tests for scalability of any kind seem to have been applied.) The intensity question used took the form: "How strongly do you hold this opinion--very strongly, fairly strongly, or don't you care much

one way or the other?" What Cantril does to illustrate the relationship between intensity and opinion is simply to plot the percentage of persons making the "very strongly" response for each of the statements against the average favorable-unfavorable continuum rating determined by the judges. This throws into juxtaposition opinions of the 80 judges about the position of the statements on an a priori determined continuum with expressions of intensity made by the sample public surveyed. Cantril does not describe the characteristics of the judges, perhaps for the reason (although he does not state it) that older studies by some of Thurstone's students and others purported to demonstrate that the rating of favorableness-unfavorableness of an attitude statement by judges was independent of the judges' own position on the attitude (14, 32, 53).

Doubt as to the independence of judges' ratings of attitude items and their own attitudes was raised quite early in the history of attitude measurement by Stuart Rice (54). Later, E. S. Marks (48), in the process of standardizing a "race attitude for Negro youth" by a combination of Thurstone and Likert techniques, observes that:

In devising a test for measuring attitudes having high emotional significance for the individual it is very difficult to secure constancy of meaning from individual to individual or even within the same individual from one time to another Almost inevitably statements will have variable significance for different individuals.

Marks interprets the results achieved by Ferguson (14) and by Pinter and Forlano (53) as a product of the relatively homogeneous cultural backgrounds of the individuals acting as judges. Marks further calls attention to Hinckley's (32) discarding of judgments made by persons who tended to place large numbers of statements in a single category, and points out that this was done more often by Negro than by white judges, a fact which may affect results.

Only quite recently studies by Hovland and Sherif (34) have thrown considerable doubt on these older studies by showing that the opinions of

judges very definitely do have influence on the positioning of statements in a scale constructed by Thurstone's method.

Cantril's (4) method of plotting yielded U- and J-shaped curves based on the four or five attitudinal position points against the corresponding expressions of intensity. Cantril interprets the finding that "the more extreme an attitude is in its direction, the more intensely is it likely to be held" as fitting in with his conception of ego-involvement--the more extreme attitude being more likely to involve the ego than an attitude which represents compromise in some degree. Another finding of Cantril's, about which we shall have more to say later, is that: "With respect to the issues studied here, there is a tendency for people who are better-educated, better-off financially, and who are older to hold their attitudes with greater intensity than those less well educated, less secure economically, and younger." Cantril suggests that specific reasons in terms of ego-involvement for this tendency should not be hard to discover, but holds that the polling technique is not well adapted to explore such reasons, and makes no effort to do so.

The most extensive analysis of the intensity component in attitude measurement has thus far been provided for in a series of developmental papers by Suchman and Guttman (65, 66), which have also been given lucid expository treatment by Stouffer (62).

Indeed the present study utilizes data collected when the author was associated with Suchman and Guttman in the Research Branch of the Information and Education Division of the War Department at which time Professor Stouffer was director of the professional staff.

The results of Suchman's and Guttman's work which are applicable to our problem may be briefly summarized as follows:

During World War II a new method for scaling attitude items was developed in the course of studies of attitudes among military personnel. This method of scale analysis provided a rigorous answer to the problem of how to establish among respondents a rank order with

respect to a particular attitudinal continuum. Thus, on a given attitude scale an individual could be determined with near-certainty to be relatively more or less favorable than another individual.

The problem remained of determining objectively which individuals were pro and which were con on an attitudinal content continuum. A provisional answer to this more difficult problem has also been suggested. On the theory that attitudinal content is related to attitudinal intensity, it was proposed that a "region of indifference" or "point of minimum intensity" could be established which would divide the pros from the cons. A distinguishing and promising feature of this idea is that relative proportions of pros and cons on an attitudinal content scale would be independent of question wording.

In the mathematically ideal case the attitudinal content scale and the intensity function form two of a set of perfectly related "principal components." The content scale is the first component--a monotonic increasing function of the ranks. The intensity function--that is, the relation between a measure of attitudinal intensity and attitudinal content--constitutes the second component. Again in the ideal case, the second component is a U-shaped or J-shaped curve.

Empirical studies of the first and second components of scale analysis have, of course, not found data which fit the perfect model with absolute precision. Considerably more research has been done on attitudinal content scales and better fit between fact and theory has been found for this first component than for the second component--the intensity function. What little research has been done on the intensity function has revealed general harmony with the theory, but, thus far, empirical findings have been but crude approximations of the model.

One approach toward refining the relationship between content and intensity has been via the concept of "generalized intensity." On the supposition that some individuals are habitually more intense in their attitudinal content than others (or differ consistently in their verbal habits), an effort to account for the wide dispersion of intensity scores around midpoints of intensity for attitudinal content scale-scores was made. By holding constant "generalized intensity" the variability around the curve of the intensity function was necessarily reduced. Considerable variability around the intensity curve still remained.

PROBLEM

The problem is suggested by Suchman (66). In Measurement and Prediction, he expresses the hope that "further research will probably serve to reduce much of this variance" around the curve of the intensity function. The question becomes basically: Under what conditions will Guttman's model for the first two components of scale analysis find maximum fit with empirical psychological data? Previous applications to large undifferentiated populations have revealed proximate fit, sufficient closeness to give promise to improved techniques of attitude measurement and analysis. Can we now make any progress in ascertaining conditions under which observations about the direction and intensity of attitudes will be explainable, or at least more reproducible than heretofore, by the conceptual model?

Intensity of attitude has been found to be a function of attitudinal position. It has not been found to be a perfect function. Part of the deviation from perfection has been ascribed to the influence of "generalized intensity." What other sources of deviation might there be?

The question just posed may be translated, in research terms, into a search for significant correlates of attitudinal intensity. For suggestions as to the principal hypotheses to guide us in this search we are primarily indebted to the findings of the Allport and Hartman study and to that of Cantril, to both of which we have already referred. The Allport and Hartman conclusion that atypicality of opinion and emotional make-up are closely related leads us to one set of hypotheses. Cantril's findings that older and better educated persons in the general public are more intense in their opinions about certain public issues lead us to another set of hypotheses. The central hypothesis for each of the two sets of hypotheses is:

- I. Attitudinal intensity will be a function of personality.
- II. Attitudinal intensity will be a function of status in a group.

When we asked ourselves what kinds of personalities would contribute

to the distortion of a theoretically perfect relationship between the direction of an attitudinal position and its intensity, we arrived at a number of common-sense specific hypotheses. Apart from neutrality of opinion, what personal characteristics would we expect to be associated with lack of conviction or strength of feeling? It seemed reasonable to suppose that persons with sustained inferiority feelings would be characterized by a general lack of conviction whenever called upon to express their social opinions. It seemed reasonable also to suppose that persons who were even temporarily depressed would be unlikely at the time to display strong feelings in support of whatever social opinions they happened to possess. On the reverse side of the coin, we could picture chronically enthusiastic and vigorous persons who might bolster their every fleeting opinion with profound avowals of certainty and conviction. Yet another possibility of unusual strength of conviction seemed likely in the case of the persistent deviant. A person perpetually out of tune with the social value system of his reference group could perhaps be expected to defend even ordinarily neutral opinions with considerable force. These hypotheses barely dip into the possibilities; they were sufficient, however, to set the scope of the present research.

Cantril's findings suggested to us that there might be a common thread connecting the apparently disparate findings of association between various background characteristics and intensity of opinion. It occurred to us that this thread was "status in a group" variously expressed. The reasoning was this: the higher a person is in an agreed-upon hierarchy the greater tolerance does the group have for his opinions. Indeed the higher the individual's status, the more does the individual feel called upon to back up his opinions, however mild and non-controversial, with positive assertions of conviction.

In a sense, the problem may be thought of as contrasting or placing in perspective the relative contributions to attitudinal intensity of underlying

individual personality traits and of current status forces operating in a given group. If we wish to be grandiose about it, we may consider the problem as an empirical test of Aristotelian versus Galilean approaches to a psychological problem as distinguished by Lewin (45). In Aristotelian dynamics, the supposition would be that attitudinal intensity was determined by the inherent personality of an individual and our effort should consequently be bent toward identifying more or less stable and characteristic personality traits of attitudinally intense persons. In Galilean thinking, our emphasis should be on ascertaining and describing those forces operating on as well as within an individual in a given moment of time which tend to make him express himself with a certain degree of intensity. Past studies have offered evidence of both kinds for different population groups. The present study is concerned with evaluating both sources of variation for the same population group.

In more humble terms, we wish to examine the relative contributions of a limited number of internal and external factors to attitudinal intensity.

METHOD

A. Measures

The problem as stated required that four types of measurement or observation be made simultaneously on the same group of subjects. The types of measure or observation needed were:

1. Measures of attitudinal position or direction.
2. Measures of attitudinal intensity.
3. Measures of personality.
4. Measures of group status.

We shall take up each one of these in turn.

1. Measures of attitudinal position or direction--The data for this study were collected when the author was a member of the staff of the Research Branch, Information and Education Division, Department of the Army. The mission of the Research Branch was to assess morale and related attitudes among military personnel. The present study was built around a variety of attitudinal content of interest to the Army after the cessation of hostilities in World War II. Thus the attitudinal content dealt with here comprises the following subject matters: attitudes toward officers; attitudes toward the Army; attitudes toward discipline and toward rules and regulations; attitudes toward military needs for manpower; and attitudes toward methods of dealing with Russia. These subject matter areas, constituting the background of attitudinal content for the present analysis, were embedded in a pair of attitude questionnaires dealing with a number of other subject matters of related but of more specific administrative interest to the Army at the time.*

*Substantive aspects of these specific subjects have been previously reported in publications of the Research Branch, Information and Education Division, Department of the Army:

Each universe of content was tapped by a series of questions, the number in a series varying with the particular universe. Furthermore, each universe of content was hypothesized as unidimensional. It should be added, parenthetically, that none of the content areas was a wholly new subject for investigation. Each had previously been explored by various investigators with some degree of thoroughness in five war-time years of attitude research in the armed forces. It was not at all surprising then that when the sets of items for the various contents were tested for scalability they were, with one exception, found to be scalable (see RESULTS).

From a methodological viewpoint, the main reason for including a variety of contents was to permit construction of a measure for 'generalized attitudinal intensity.' One content area, namely that of attitude toward officers, was selected as a substantive basis for construction of a measure for 'specific attitudinal intensity.' The selection of the 'attitude-toward-officers' area for this purpose was done primarily on the ground that this area of content appeared to be the most adequately covered, i.e. by the greatest number of questions. Little attention is paid in this report to the substantive aspects of the study which merit important attention by themselves.

Report B-172. Star, S. A., "Attitudes toward the Point System," Dec. 1945.

Report B-173. Elinson, J., "Attitudes of Enlisted Men toward Fairness of Courts-martial," Dec. 1945.

Report B-178. Elinson, J., "Attitudes of Enlisted Men toward the Inspector-General System," Jan. 1946.

Another subject dealt with at the same time was attitude toward giving preference to veterans for government jobs. In one of the earliest applications of Guttman's scaling techniques, an account of this subject was rendered in the author's Master's thesis at the George Washington University, and subsequently presented in more popular form by Cisin, I. H., and Elinson, J., "Do Veterans Want Preference?" Personnel Administration, May 1948.

The items included in the various content areas and results of scalogram analysis of each area are shown in the Appendix.

2. Measures of attitudinal intensity--To study the intensity function we needed to have scales of intensity of respondents' feelings about a subject. The technique used was to follow each content item with a second item such as the following:

How strongly do you feel about this?

- Not at all strongly
- Not so strongly
- Fairly strongly
- Very strongly

Some of the content questions were followed by multiple-choice response categories which embodied a statement of intensity as well as direction à la Likert. This would have permitted construction of both an intensity scale and a content scale from responses to the same question via the "fold-over technique."* Since obtaining two scores from the same question implies that the scores are not experimentally independent, this procedure was eschewed in the present study. The wording of the categories in the responses to some content questions dictated a change in the succeeding intensity question, such as follows:

How hard was it for you to make this choice?

- Very hard
- Fairly hard
- Not so hard
- Not hard at all

There may be some a priori objections to use of different forms of questioning to get at the same variable of intensity. The one form: "How strongly do you feel....?" appears to be tapping strength of feeling; the other form: "How hard was it to make your choice?" appears to be assessing difficulty of choice. Previous experimentation using matched groups answering the same content questions but different

*Measurement and Prediction, p. 252.

intensity questions, including the ones used here, have shown no significant differences in the intensity curve.* These results are in harmony with those reported by Katz (39) for public opinion polls.

Then without regard to the direction of response, whether favorable or unfavorable, on the preceding content items, the intensity items for a given scale of content items were used to test for scales of intensity. Results of scalogram analysis for intensity items are given later.

We differentiated between 'specific attitudinal intensity' and 'generalized attitudinal intensity' in the following way. 'Specific attitudinal intensity' was a scoring of responses to intensity questions relating to a single content scale. As already indicated, we made this kind of use of intensity questions associated with the content scale of attitude toward officers. 'Generalized attitudinal intensity' was derived from expression of intensity over a number of attitudinal contents--attitude toward officers, attitude toward need for military manpower, attitude toward dealing with Russia, attitude toward the Army, and attitude toward discipline and rules and regulations.

3. Measures of personality--The setting of our study--military morale attitude surveys by means of self-administered questionnaires--placed a severe restriction upon the kinds of personality assessment that could be made. We looked for objectively-scored personality tests that could be suitably integrated with an attitude questionnaire. Since there was no interest per se in attempting to make fine individual personality assessments or predictions about individuals, but rather a desire to observe correlations among gross personality trends and attitudinal behavior, restriction to superficially simple objectively scorable items

*Measurement and Prediction, p. 249.

did not, at the time, appear to be an unbearable handicap. This was especially so since selection research in both the Army and Navy, using paper and pencil tests such as the Neuropsychiatric Screening Adjunct (59), the Cornell Selectee Index and others, had shown that self-administered objectively-scorable tests were capable of predicting psychiatric appraisals at induction in a worthwhile number of cases.

The instrument which appeared most promising on its face, in terms of furnishing measures of the kinds of personality variables to match our hunches with respect to relationships with attitudinal intensity, was the Minnesota Multiphasic Personality Inventory (24,25,26,27).

The descriptions of three of the then published MMPI "scales" seemed to provide the kinds of personality characterizations that were needed for analysis. The three sets of items with provocatively useful MMPI descriptions were: 'hypomania' (Ma); 'depression' (D); and 'psychopathic deviate' (Pd).

In our statement of the problem we hypothesized that persons who were depressed would tend to respond to attitudinal questions with low intensity. The MMPI manual carries the following descriptive phrases for "depressed" persons:--

... poor morale of the emotional type with a feeling of uselessness ... a characteristic personality background in that the person who reacts to stress with depression is characterized by lack of self-confidence ...

We hypothesized also that habitually ebullient persons would tend to respond to attitudinal questions with high intensity. The MMPI manual says its 'hypomania' scale measures--

... the personality factor characteristic of persons with marked productivity of thought and action. A principal difficulty in the development of the scale was the differentiation of clinically hypomanic persons from normal persons who are merely ambitious, vigorous, and full of plans. The hypomanic ... is active and enthusiastic ... his activities may interfere with other people through attempts to reform social practice, his enthusiastic stirring up of projects ... or his disregard of social conventions.

The MMPI authors fear that the 'Ma' scale might fail to differentiate normally active persons from clinically hyperactive persons. If this fear is justified, the failure of the scale in this respect can only be considered an advantage from the point of view of our own research. We were less interested in identifying clinically abnormal persons than we were in discovering persons who were customarily positive and sure of themselves.

The description of the MMPI 'psychopathic deviate' scale seemed to furnish phrases which were harmonious with another of our hypotheses about the relation between attitudinal intensity and personality. Socially deviant persons, we thought, would deviate also in their pattern of attitudinal response, by registering strong intensity of feeling in support of a neutral opinion where strong intensity was not typical.

The MMPI manual describes psychopathic deviate personalities as--

... persons whose main difficulty lies in their absence of deep emotional response, their inability to profit from experience, and their disregard of social mores. Although sometimes dangerous to themselves or others, these persons are commonly likeable and intelligent.... They may go on behaving like perfectly normal people for several years between one outbreak and another.

In addition to the MMPI items, a set of items was needed which dealt more directly with feelings of inferiority in order to test our hypothesis as to the relation between such feelings and attitudinal intensity. It was felt that the MMPI 'depression' scale as described by its authors might be too extreme or insensitive an instrument for the isolation or sorting out of persons exhibiting low attitudinal intensity. Another personality measure was required to be built into the questionnaire--resembling in content the 'D' items of the MMPI, but somewhat more socially or interpersonally oriented. The set of items which seemed to fill this requirement was found in Sletto's Inferiority Scale (57). Among these items is: "So many people do things well that

it is easy to become discouraged." It was relatively easy to imagine how a person who felt this way about himself might be generally disinclined to maintain social opinions with any degree of conviction or intensity.

These four sets of items then constituted our personality measures. It should be noted that not all the items in the original "scales" were used, but only a selection of them. The selection was made on the basis of two criteria: one, that the wording of the items be simple enough to be understood by men who had not gone beyond grade school, and two, that the marginal frequencies of the items should exhibit as wide a range as possible. The particular items used for the various personality scales are shown in the Appendix.

Although the questionnaires were administered anonymously, so much has been made of faking (17, 35) on personality inventories that a number of MMPI items suitable for deriving a 'lie' score were also included. All the personality item-sets including the 'lie' items were tested for unidimensionality by scalogram analysis.

4. Measures of group status--The phrase "measures of group status" is used to connote the common core of psychological meaning in such indices of group position in the general American culture as age and educational level. In the more restricted culture of the American Army additional indices such as formal military rank and length of military service have similar connotations. The principal characteristic of all such variables is that, the higher the value is, the more superior is the position of the individual with respect to the rest of the population. One of our principal hypotheses is that relative superiority is associated with relative certainty of opinion or strength of feeling. In the questionnaire, we ascertained in rough groupings, a man's age, his educational level, military rank, and length of military service. The

broad groupings on each of these background variables were adequate for purposes of correlational analysis, yet gave our respondents additional assurance that their replies to the questionnaires were strictly anonymous.

B. Respondent Population

The Army population in the United States in the Fall of 1945 was composed of newly-trained recruits, seasoned combat veterans, and men with all degrees and types of service in between. This was shortly after the cessation of hostilities in World War II, and large proportions of men who "had done their share" had already been returned to the States, although extensive demobilization had not yet begun. The military mixture was even further heterogenized, since this was nearly two years before "unification" and the U.S. Army included not only Ground and Service troops, but all components of what today is known as the Air Force.

In consideration of the fact that attitude toward the Army was an important focus of the substantive aspects of this study, it was decided to exclude from the population surveyed men whose military experience was so limited as to render unlikely the possibility that their attitudes toward the Army had crystallized to any degree. Accordingly, new men who had not yet finished their basic training were not made part of the population under scrutiny.

Two other limitations were placed on the heterogeneity of the population to be studied by the exclusion of officers and of non-white enlisted men. Because of these exclusions the generality of the substantive findings of the study would necessarily be reduced; at the same time, the influence of two important variables, officer-enlisted man status and skin color, would be controlled by elimination.

Sample size was set at about 3000 for each of the alternate forms of

the hour-long questionnaire, it being felt that 3000 cases would permit of a reasonable amount of analysis of the kind contemplated. The sample of men was drawn from large Army Ground and Service Force installations selected because they contained units representative of all the arms and services, and from large Army Air Force fields with a variety of units, e.g. flying, maintenance, administrative.

Sampling instructions issued to field officers were to get the required number of enlisted men, excluding recent inductees in training, such that proportional representation of the three forces--Ground, Service and Air--and within the three forces the known ratio of overseas returnees to Zone of Interior personnel--would obtain. Aside from these requirements field personnel were carefully instructed to draw their samples of men from units such that all branches and components would be proportionally represented.

The selection of individual men at any installation visited was done on a probability, or systematic random basis, eliminating possibilities of bias inherent in voluntary or self-selection, or selection by designation or easy availability. Selection was done from unit lists of all men on duty--men sick in hospitals, on furlough, absent without leave, or in the guardhouse at the time of the survey were not sampled. The installations visited, the units sampled, and the number of men drawn from each unit are listed in the Appendix.

C. Technique Employed for Collecting Data

The technique for gathering data was the self-answered anonymous questionnaire administered in group situation by specially trained "class leaders." Enlisted men were assembled in groups of twenty to fifty and were introduced to the survey by a "class leader." Class leaders were usually selected from among men who were assigned to Classification or Information

and Education work or were otherwise deemed qualified for carrying out field operations in opinion research. The attempt was made to maintain an atmosphere of friendly anonymity. The Appendix contains an example of an introductory talk which each class leader, usually an enlisted man, was instructed to deliver extemporaneously. This "spiel," as it was called, was in most respects similar to the one used by the Army's Research Branch, Information and Education Division, during World War II. Points in common were: 1) emphasis on the fact that an attitude survey was not a test, that no marks or grades were given since there were no "wrong" or "right" answers, 2) that the survey was anonymous,* and 3) that answers given by the ranks would help top-level officers in planning for the welfare of the men. Two other points required special emphasis: 1) the importance of including personality items which might appear silly to some soldiers, and 2) the importance of including intensity items as well as content items. Pretesting experience had suggested that without special attention to the first of these two points men would be inclined to doubt the significance of the personality items and to treat the survey as "just another Army test."

To help convey the informality of the setting in which class leaders operated, a set of instructions for class leaders is included in the Appendix. The general aim of these instructions was to insure uniformity in administration and to provide an informal, relaxed, non-authoritarian setting to maximize cooperation in expressions of attitude.

Field officers who trained the class leaders and obtained clearances for the study in local commands underwent a brief orientation course in attitude research and operated in the field according to a standard set of instructions. (See Appendix.)

*Studies of the anonymity factor have revealed the differential effect of anonymity in morale attitude surveys in the military service (5, 12).

The actual questionnaires used (Forms A and B) are also shown in the Appendix. The general layout of the questionnaire has largely the appearance of (one side of) a printed conversation in terms of the sequence of questions and, it will be noticed, little the appearance of a test. Actually the questionnaire was constructed on the basis of extensive pretesting and the accumulated experience of five years of this type of research in the armed forces.

Each of the two forms of the questionnaire was used in a random half-sample, the use of two forms making possible the gathering of data in a larger number of attitudinal areas that could be related to the personal background and personality items common to both schedules, than would be feasible on a single form.*

The questionnaire covered three types of data: factual, attitudinal, and personality. All of these data were obtained directly from individuals about themselves. It can be maintained that such a procedure submits to

*The double form of the questionnaire permitted also experimental study of a number of additional minor methodological problems as well as an analysis of certain problems of immediate interest to the Department of the Army. Neither of these purposes is considered a part of the study under consideration here. The minor methodological problems listed below are of reference interest only.

Minor methodological problems:

- (1) Will a multiple-choice check-list yield the same results as having respondents express agreement or disagreement with each of the categories separately?
- (2) Will asking a series of questions in reverse order reveal a pile-up or band-wagon effect on the questions appearing later in the series?
- (3) Will inclusion of certain phrases in question-wording affect response to questions: e.g., "all things considered," "considering their responsibilities"?
- (4) Will preceding a "you yourself" question by a "men in general" question affect responses to the "you yourself" question?
- (5) Will so-called "neutral" wordings of questions differ in results from so-called "leading questions"?
- (6) Will reversals of check-lists affect response distribution?
- (7) In agree-disagree statements, what is the effect of using negative statements?
- (8) What is the difference if any in asking "how many of" versus "how often" with respect to attitudes toward officers?

personal error: that self-reports about "facts" such as age, education, marital status, etc., are affected by projection and other dynamisms to create unreliability; that self-reports of attitude cannot be distinguished from expressions of opinion since they are on a verbal level and may not be an index of muscular behavior; and that self-revealed personality characteristics are subject to willful and unconscious distortion. It is not the purpose of this study to engage in an extensive analysis of these contentions although the possibility of distortion was recognized and efforts were made (as have already been described) in the direction of creating the kind of atmosphere in the process of data collection which would minimize motivation on the part of respondents to deviate from the truth, as they saw it.

It is in no sense a defense of the instruments employed to say that they were identical to those used as a basis for Stouffer, S. A., et al, Studies in Social Psychology in World War II. Furthermore, we plead guilty of treating verbal behavior as intrinsically of psychological interest and not to be disregarded as a matter of scientific inquiry merely because it is relatively easy to observe. And finally, since our principal interest is in relationships among variables we may derive some comfort from the probability that more defensible measurements than those here employed--particularly with reference to personality variables--would etch even more sharply and definitively any relationships we may uncover with our relatively crude questionnaire instruments.

RESULTS AND ANALYSIS

A. Testing for Unidimensionality

1. Attitudinal position measures--The concept of "specific attitudinal intensity" takes on meaning only when we have knowledge of the nature of the attitudes with which feelings of intensity are associated. To ascertain whether or not the sets of attitudinal content items we have used as the underpinnings for intensity were meaningful, in the unidimensional sense, we tested them by means of scalogram analysis.

Summary results of the scalogram analysis giving reproducibility coefficients for the attitudinal content variables are shown in Table 1. Actual scalogram pictures showing the joint multivariate distributions of each set of items for a subsample of 100 cases may be seen in the Appendix.

Using Guttman's reproducibility coefficients* as a criterion of unidimensionality for scale analysis has a number of serious disadvantages. One of these, shown by Sheffield and Elinson (as cited by Hausknecht (29, 56) and noted also by Festinger (15)) is the numerically high expected value of the reproducibility coefficient for chance-related items with given marginal frequencies. For example: for any set of three dichotomous items each having marginal frequencies of 50%-50%, and using the conventional procedure of scoring to nearest scale-type to minimize error, it is impossible to get a reproducibility coefficient of less than .83. A number of substitutes for the reproducibility coefficient have been proposed. Among these are Loevinger's coefficient of homogeneity (47) and Hausknecht's (30) application of the chi-square test to proportions of 'scale-types'.** Loevinger's coefficient involves a ratio of obtained inter-item correlation to the maximum amount of inter-item correlation possible with a given set of item frequencies; Hausknecht's chi-square method compares the proportion of scale-types probable from a given set of item frequencies when no assumptions are made about unidimensionality with the frequencies obtained under a scale hypothesis.

*The coefficient of reproducibility tells us what proportion of persons' responses can be exactly reproduced from scale scores. The computing formula is simply:

$$1 - \frac{e}{n \cdot i} \quad \text{where } e = \text{number of errors (that is, failures to reproduce responses from scores)}$$

$i = \text{number of questions}$
 $n = \text{number of respondents}$

**A 'scale-type' is a person all of whose responses are perfectly reproducible from his scale score.

A second disadvantage of the reproducibility coefficient is that to date its sampling distribution is unknown. (We have been informed by E. S. Marks that a probability approach to the reproducibility coefficient or to the notion of scaling generally, leads to some highly complicated mathematical problems not yet amenable to solution.) The sampling distributions of substitute coefficients thus far suggested, however, are not known either. From the point of view of the advantage of a known sampling distribution, Hausknecht's application of chi-square recommends itself. The peculiar disadvantage of Hausknecht's method is that it is overly severe in the handling of non-scale types, which contribute as much unpredictability when only one of their responses is non-reproducible as when more than one or many responses are non-reproducible. Hausknecht (31) recognizing this difficulty, has subsequently proposed a 'coefficient of ordinality,' E_m , which relates the number of scale errors in a chance case to the number in the maximum error case. Formal proof is lacking that E_m is a maximum.*

Guttman's reproducibility coefficient is affected by both the number of items and the item frequencies. The greater the number of items the more difficult it is, other things being equal, to achieve high reproducibility. The closer the item-splits on a dichotomous item are to 0%-100% the easier it is to achieve high reproducibility. For example, it will be obvious that from the knowledge that a dichotomous item splits 10%-90%, it is impossible, using ordinary probability expectations, to make more than 10 per cent error of reproduction for that item.

*Hausknecht's 'coefficient of ordinality':

$$E_m = \left(\sum_1^{q-1} f_i \right) + (n-q)N - \left(\sum_{q+1}^n f_i \right) \quad \text{where}$$

E_m - - - - - is the maximum number of errors

N - - - - - is the total number of respondents

n - - - - - is the total number of items or questions

f_i - - - - - is the i th item-frequency

i - - - - - is the ordinal number of the item-frequency of the ordered series

$(f_q + f_{q+1}) > N$ - is the first pair of the item-frequencies whose sum exceeds N ; q being the ordinal number of the lesser of the pair, and $q+1$ being the ordinal number of the larger of the pair.

The reproducibility coefficient has been used in the present analysis for the principal reason that regardless of its disadvantages and the partial compensation for certain of its disadvantages by other possible measures of ordinality, it retains one important property which none of the others thus far suggested does. This is simply the property of reproducibility, namely of being able to say to what extent scale scores are capable of reproducing actual responses made to items.

TABLE 1
RESULTS OF UNIDIMENSIONALITY TESTS FOR
ATTITUDINAL CONTENT VARIABLES

Attitudinal Content	Reproducibility Coefficients		Number of Items	
	Form A*	Form B**	Form A	Form B
Attitude toward officers		.91		9
Attitude toward military needs for manpower		.92		6
Attitude toward principles of officer-enlisted men relationships	.93	.89	3	7
Attitude toward the Army	.92	.98	5	3
Attitude toward discipline	.93		4	1
Attitude toward rules, regulations and courts-martial	.92		4	1
Attitude toward methods of dealing with Russia	.94		3	1

*Reproducibility coefficients based on 100 cases, constituting a random subsample of 2908 men who took Form A.

**Reproducibility coefficients based on 100 cases, constituting a random subsample of 2902 men who took Form B.

Note: The set of items in Form B dealing with 'attitude toward principles of officer-enlisted men relationships' failed to pass the test for unidimensionality on more than one count. As the scalogram (in the Appendix) shows: the reproducibility coefficient for the seven items was below .90; some items had more error than non-error; and some of the error was non-random and non-gradient, i.e. more than ten per cent in a non-scale pattern. A reproducibility coefficient of .91 was obtained by setting aside three of the items from scale consideration, but the other scale criteria were still not met.

With one exception, each of the attitudinal content variables met, in subsamples of 100 cases, all the criteria of scalability which have conventionally been used; namely: over 90 per cent reproducibility; more non-error than error in the category having lowest frequency for each item; non-extreme marginals; and non-grouping or randomization of errors of reproduction. Reproducibility coefficients ranged from .89 to .98. Undoubtedly had use been made of Stouffer's (65) H-technique for increasing reproducibility of scales by means of contrived items, composed of two or more items, even higher reproducibilities would have obtained. However, the obtained reproducibilities using individual attitude items appeared to be satisfactory for the analysis at hand, and there seemed to be no necessity for resorting to Stouffer's H-technique (65). Furthermore, since the reproducibility level was adequate, there was no need to sacrifice reproducible information as required by the contrived-item method.

Two items which had been included as part of the universe of attitude-toward-officer items turned out to be non-scalable, more properly referred to as not part of the same unidimensional scale as the other nine items. Examination a posteriori of these two items leads us to conjecture that these two items were qualitatively different from the other nine in that they turned the individual's or soldier's attention inward to his own problems, needs, and abilities rather than outward to an appraisal of his officers. The two items which were not included in the scale of 'attitude-toward-officers' were:

- Q 15a. How well do you feel that your officers understood your problems and needs?
- They were very much aware of my problems and needs
 - They were fairly well aware of my problems and needs
 - They did not know very much about my real problems and needs

Because of its relative length, satisfactory reproducibility, and intrinsic importance among military morale attitudes, the nine-item scale of 'attitude-toward-officers' was chosen as the substantive base around which we proposed to analyze 'specific attitudinal intensity.'

2. Attitudinal intensity measures--As were the items of attitudinal position for various areas of content, items dealing with attitudinal intensity were subjected to scalogram analysis. Results of these analyses are given in Table 2; again, scalogram pictures may be found in the Appendix.

The intensity items, following the 'attitude-toward-officer' scale items are hereafter referred to as 'specific attitudinal intensity,' since they are specific to a single unidimensional area of attitudinal content. This 'specific attitudinal intensity' yielded a reproducibility coefficient of .88, thus approaching but not reaching the conventional 90 per cent acceptance level. The errors--instances of non-reproducibility--appear to be "random"; by which we mean no non-scalable pattern appears with a frequency of greater than five per cent. (We are not acquainted with any more precise test of randomness of errors of reproducibility.) If the error of reproducibility is random, it has been frequently stated that no matter how low the reproducibility is, then the "multiple correlation of any outside variable on the area will be precisely equal to the simple correlation with the rank order on the area."* Sets of items exhibiting these properties have been called "quasi-scales." 'Specific attitudinal intensity' then is a quasi-scale.

*See statements by Stouffer (p. 15), Guttman (p. 79), Suchman (p. 162), and Star (p. 494) in Measurement and Prediction.

TABLE 2

RESULTS OF UNIDIMENSIONALITY TESTS FOR INTENSITY

Intensity	Reproducibility coefficients*	Number of items
Specific attitudinal intensity (for 'attitude-toward-officers')	.88	9
Generalized attitudinal intensity	.85	8

*Based on 100 cases constituting a random subsample of 2902 men who took Form B. The same 100 cases were used as for scale analysis of the attitudinal position variables.

The set of intensity items in 'generalized attitudinal intensity' was drawn from seven areas of attitudinal content as measured by the preceding 'attitude-toward-officer' scale and six other content scales, as previously indicated. In all, eight intensity items were used--two were drawn from association with attitudinal position items in the content area of attitude toward military manpower needs; and one each taken from association with attitudinal position items in the areas of attitude toward officers, attitude toward the Army, attitude toward discipline, attitude toward rules, regulations, and courts-martial, attitude toward principles of officer-enlisted man relationships, and attitude toward methods of dealing with Russia. The B-form of the questionnaire contained only single position items in three of these content areas; and only three items in the content area of attitude toward the Army. The content area of attitude toward officers was covered by nine items; and the attitude toward military manpower needs, by six items.

The reason for using two intensity items associated with attitude toward military manpower needs was not based on intention to over-represent this content area, but rather on the desire to diversify the kinds of items used in the 'generalized intensity' score. It will be recalled that intensity items following content questions on attitude toward manpower needs

were of the type: "How hard was it for you to make up your mind?", and intensity questions following content questions in the other attitude areas were of the type: "How strongly do you feel about this?"

The reproducibility coefficient for 'generalized attitudinal intensity' was .85. This was also a quasi-scale; similar comments therefore apply to it in this regard as to 'specific attitudinal intensity.' The fact that the coefficient of reproducibility is lower for 'generalized intensity' than for 'specific intensity' might be a product of the introduction of a miscellany of variables via the different attitudinal contents as substructures, or of the variant forms of the intensity questions used. On the other hand, our ignorance of the sampling variability of the reproducibility coefficient is such that the difference might be a chance effect. In the current absence of statistical significance tests formulated for this problem, we sorely need at the very least a table showing expected values for the reproducibility coefficient under a limited number of varying conditions, taking into account the number of items and the item marginals.

3. Personality measures--All the personality measures were subjected to scalogram analysis as were the attitudinal position and intensity measures; the rationale for this procedure, however, was somewhat difficult.

Here we were dealing with sets of items which in the case of the MMPI had been empirically developed by previous investigators. Their selection from a large pool of some 500-600 items had been made on the basis of their being able to differentiate among mental patients in hospitals and presumably normal subjects not in hospitals. Their combination into particular sets or "scales," as their authors call them, was made on the basis of successful discrimination among specific psychiatric diagnoses. The authors have provided verbal descriptions, as we have already cited, for the various item-sets. The MMPI has been called the "most promising

self-report test for diagnosing abnormal personality patterns in the clinic.* MMPI items have seen extensive application in many clinical as well as research situations and most likely have by now acquired concrete meaning for many clinical psychologists. We justify their use for the present research on these grounds.

At the same time we have for a long time now been curious as to the degree to which the MMPI "scales" were in point of fact scales as we understand the logical use of the term as explained, for example, by Stevens (60), and applied by Guttman (20) to qualitative socio-psychological data.

Results of the scalogram analyses as summarized by reproducibility coefficients for the personality item-sets are shown in Table 3; scalogram pictures may be seen in the Appendix.

Two things are immediately apparent upon examination of Table 3. One is that with the single exception of the 'lie' score, the reproducibility coefficients for the personality measures, as compared with the attitudinal position measures, are relatively low. The other is that the average number of items for the personality measures--again as compared with the attitudinal position measures--is relatively high. There is a possibility that for the number of items used the reproducibility coefficients are adequate, but we cannot know this exactly without greater knowledge about the inter-relationships among number of items, item-frequencies, and reproducibility coefficients. All of the personality variables--as an examination of the scalograms will show--contained items with extreme marginal frequencies, thus spuriously raising the reproducibility coefficients.

*Cronbach, L. J. Essentials of Psychological Testing. New York: Harper, 1949. P. 319.

TABLE 3

RESULTS OF UNIDIMENSIONALITY TESTS FOR PERSONALITY VARIABLES

Personality Variables	Reproducibility coefficients		Number of items
	Form A*	Form B**	
Psychopathic deviate	.81	.80	14
Hypomania	.81	.82	12
Depression	.79	.82	19
Inferiority	.82	.82	15
Lie	.89	.91	12

*Based on 100 cases, constituting a random subsample of 2908 men who took Form A.

**Based on 100 cases, constituting a random subsample of 2902 men who took Form B.

Only the 'lie' score yielded reproducibility coefficients (.89 and .91) which bordered on the conventional criterion of acceptance. However, inspection of the scalogram picture for the 'lie' score (in the Appendix) reveals that at least half, six of the twelve, of the items making up the 'lie' score have extreme marginals (Personality Questions 42, 62, 15, 37, 49, and 57); over 80 per cent of the men responding "False" to each of these items.

It may be noted in passing that some informal attempts by several colleagues (a sociologist, an anthropologist, and a social psychologist) to judge the "face validity" of the personality scores by guessing the direction in which the items ought to be scored from their manifest content resulted in only slightly better than chance success on the 'Ma,' 'Pd,' and 'D' subsets and were completely successful only on the 'lie' and

'inferiority' subsets. Neither the attitude scales nor the intensity quasi-scales suffered from this obscurity.

Typically, however, the personality measures like the measures of intensity did not exhibit high frequencies of any particular non-scale types. Their errors of reproducibility appeared to be more or less random, which justifies calling these measures "quasi-scales" with low reproducibility.

The 'inferiority' item-set taken from Sletto, unlike the MMPI item-sets, was not derived on the basis of correlation with external criteria, but by a method of internal consistency (57). This proved to be no advantage with respect to the test for unidimensionality.

B. Reliability of the Measures

The notion of "reliability" in the sense of stability of measures upon repetition is peculiarly inappropriate to attitude scales and intensity and personality quasi-scales. Reliability in this sense implies lack of change in the quality being measured--as the width of a table or the weight of a brick. Other things being equal, the less sensitive the measuring instrument the more "reliable" or stable our measures of such qualities appear to be. A crude thermometer will be slower (i.e. more stable or "reliable") than a sensitive thermometer in registering fine changes in temperature.

Assuming our measures of attitudinal position, intensity, and personality are sensitive instruments (a big assumption, of course) the only appropriate "reliability" tests are tests of internal consistency, like split-half correlations assisted by the Spearman-Brown formula, or Guttman's equation L_4 (19).

Split-half correlation coefficients computed for odd vs. even items on each of our principal measures yielded results as shown in Table 4. It turned out that the 'attitude-toward-officer' content scale and the intensity quasi-scales had moderately respectable Spearman-Brown coefficients, as did Sletto's Inferiority Items.

TABLE 4
RELIABILITY OF MEASURES

Sample: Total B

Measures	Number of items	Spearman-Brown	Guttman L4
Measure of attitudinal position: Attitude toward officers	9	.772	.771
Measure of intensity: Specific attitudinal intensity	9	.844	1.068
Generalized attitudinal intensity	8	.663	.897
Measures of personality: Psychopathic deviate	14	.134	.130
Hypomania	12	.341	.821
Depression	19	.414	.444
Inferiority	15	.721	.795
Lie	12	.510	.543

The MMPI item-sets were lower, especially the 'psychopathic deviate' set. Judging from its reliability coefficient, it may be concluded that half the 'psychopathic deviate' items have practically nothing to do with the other half. Suspecting a computational error for the 'Pd' items, we split-half scored them a second time, using every third item in circular fashion to make up our half-scores. This second time the r_{SB} was .346, somewhat higher than before but still lower than for the rest of the item-sets. Incidentally, there was no computational error for the r_{SB} of .134.

We have nothing comparable to reliability coefficients for the single question measures of status that we used--age, educational level, length of service and military rank. For these we merely offer consistency between two forms of the questionnaire on random samples of men. Although the bulk of our analyses will be restricted to the Form B sample, visual inspection of the frequency distributions for the status measures will show there were no important differences between the Form A sample and the Form B sample. See Table 5.

TABLE 5

COMPARATIVE FREQUENCY DISTRIBUTIONS FOR VARIOUS
CHARACTERISTICS FOR FORM A AND FORM B SAMPLES

Status Variables	Form A N=2908	Form B N=2902
Age:		
19 years or younger	13%	13%
20 to 24 years	37	39
25 to 29 years	28	27
30 to 34 years	17	16
35 years or older	4	4
Not ascertained	<u>1</u>	<u>1</u>
	100%	100%
Educational level:		
Grade school	18%	18%
High school	62	62
College	19	19
Not ascertained	<u>1</u>	<u>1</u>
	100%	100%
Military rank:		
Private	22%	21%
Private First Class	24	25
Non-com	52	51
Not ascertained	<u>2</u>	<u>3</u>
	100%	100%
Length of military service:		
6 months or less	6%	6%
Over 6 months up to 1 year	11	12
Over 1 year up to 2 years	21	21
Over 2 years up to 3 years	32	30
Over 3 years up to 4 years	23	25
Over 4 years	6	5
Not ascertained	<u>1</u>	<u>1</u>
	100%	100%

C. Shapes of the Distributions

Some students of attitude measurement frequently behave as though distributions of attitude carried the gene of the normal probability curve inherited from ancient theories about errors of observation in the physical sciences (40). Actually the normal distribution, aside from its theoretical importance in sampling theory, we now understand to be nothing but an acquired characteristic and like a bad habit, its use as a basis for statistical manipulation may well be dispensed with when inapplicable to the observations at hand. Instead of assuming that attitudinal positions and intensities are normally distributed, as some of our distinguished predecessors have done (46), let us see what their distributions actually are in the sample at hand under the necessary restriction of the methods employed. It should be noted that the actual distributions obtained in any sample are wholly dependent upon the particular set of items used. Since we are never able to say that the items used are a random sample of the population of items, we cannot therefore say that the same distributions would obtain in the population of items.

When we examine Figure 1 showing distributions of attitudinal intensity and position scores, we note the following:

1. 'Specific attitudinal intensity' (associated with attitude toward officers) is clearly not normally distributed. Rather, it appears to be rectilinearly distributed with upturns of the frequency curve at both extremes.
2. 'Generalized attitudinal intensity' deviates from linearity, but neither is it normally distributed. It appears to be skewed negatively.
3. Attitudinal position for 'attitude-toward-officers' is also non-rectangular and non-normal. It appears to be skewed positively.

Scores for the personality variables, however, exhibit distributions approximating normality. See Figure 2. The curve for 'inferiority' scores appears to be more platykurtic than the others.

FIGURE 1

FREQUENCY DISTRIBUTIONS OF ATTITUDINAL INTENSITY AND POSITION SCORES

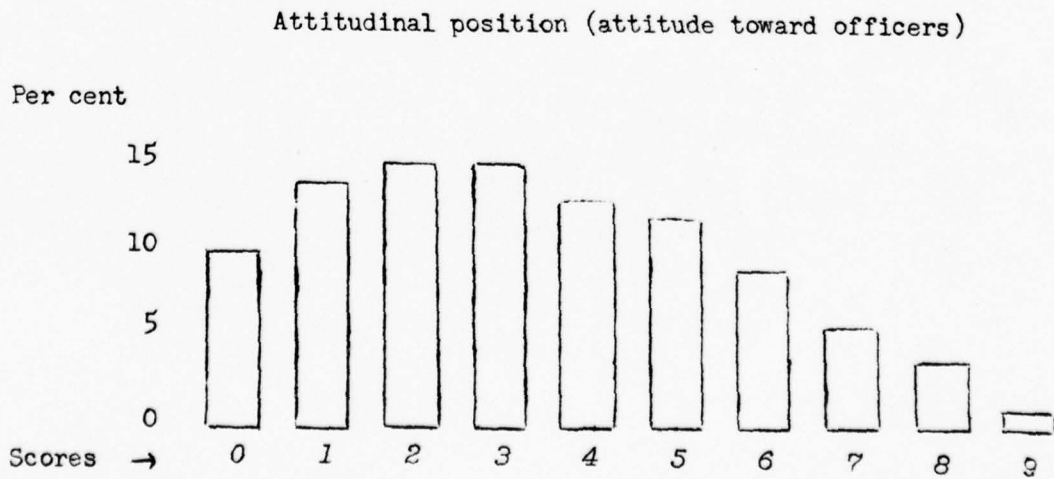
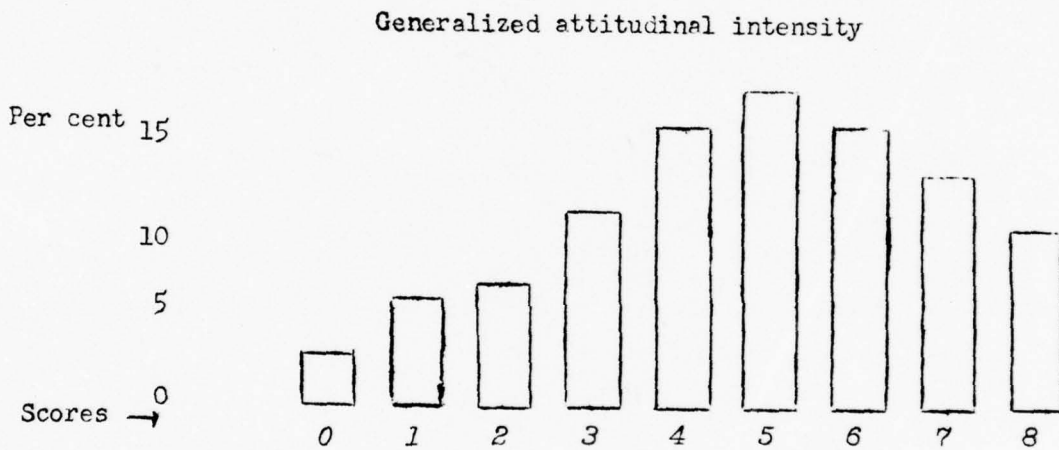
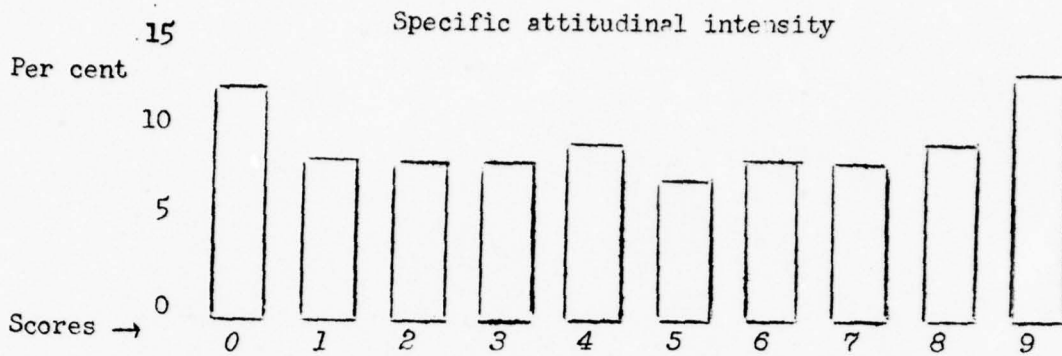


FIGURE 2

FREQUENCY DISTRIBUTIONS OF PERSONALITY SCORES

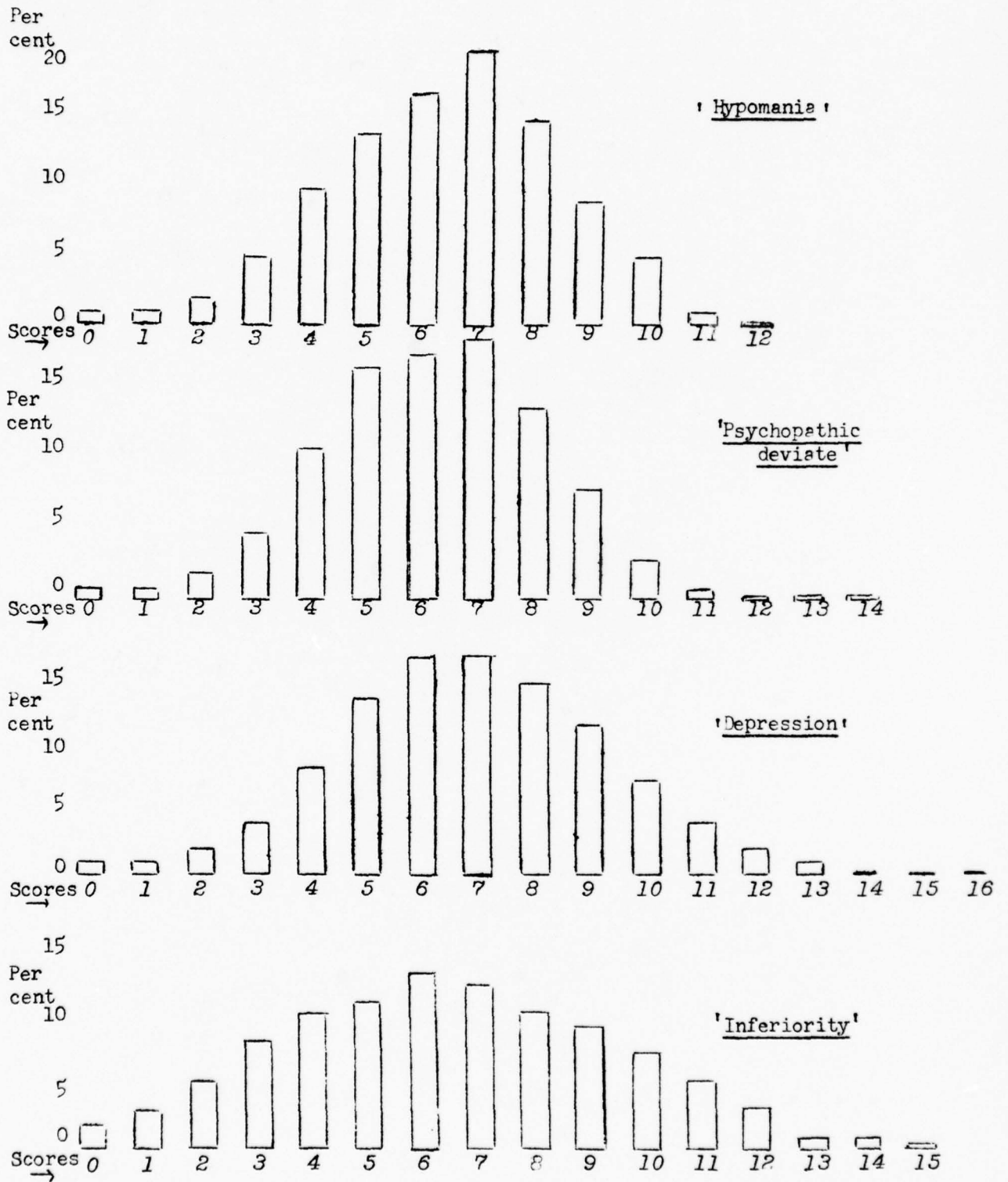
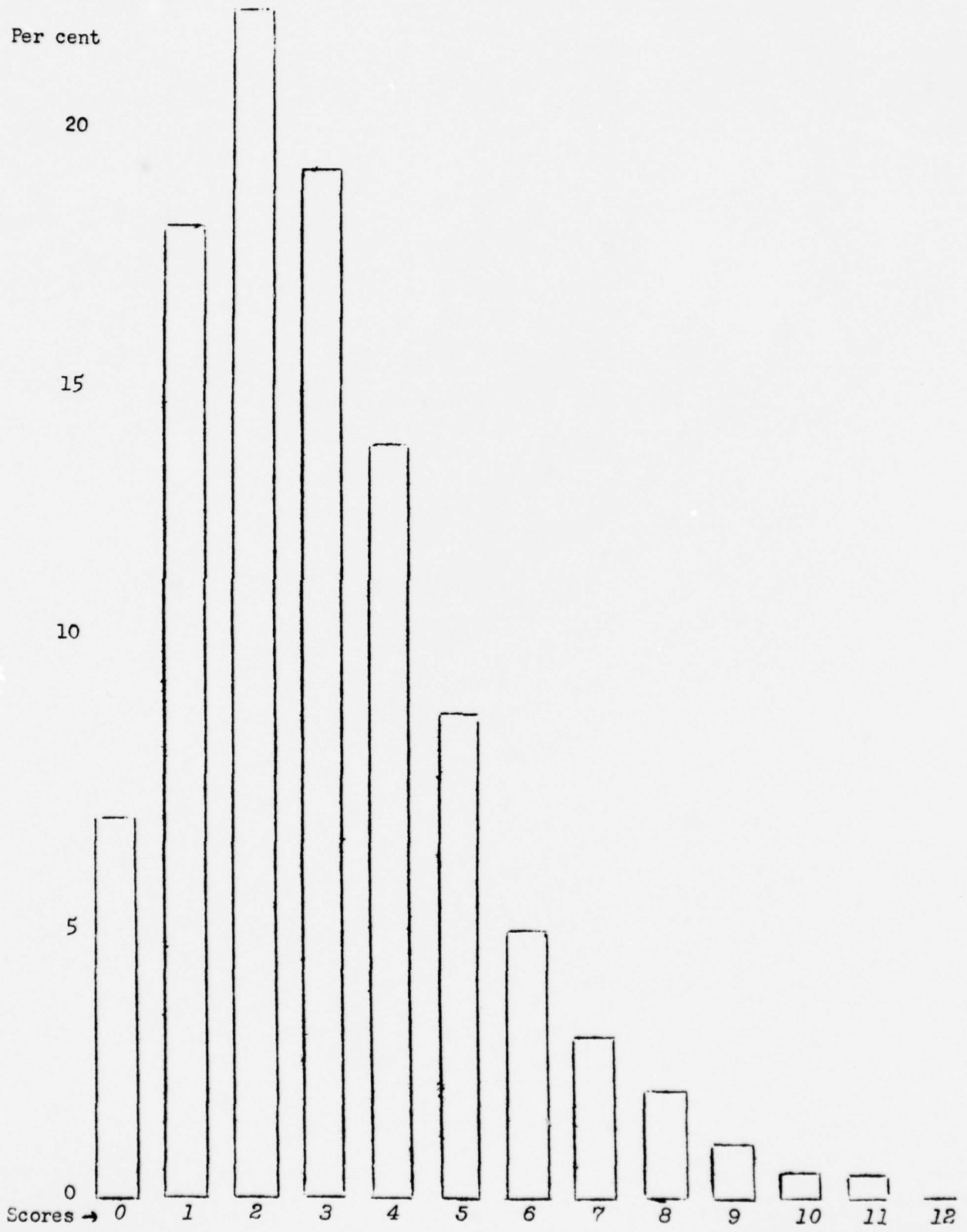


FIGURE 3

FREQUENCY DISTRIBUTION OF 'LIE' SCORES



Special attention is called to the distribution of 'lie' scores, which is distinctly skewed positively, as a consequence of relatively few persons earning high 'lie' scores. Given 12 chances to 'lie,' fewer than three per cent 'lied,' as often as nine times. Since lower and more moderate 'lie' scores cannot be interpreted as lying, it is safe to conclude there was no conscious effort on the part of most men, answering the questionnaires under conditions guaranteeing anonymity, to distort their responses from their "true" feelings.

D. Factors Related to 'Specific Attitudinal Intensity'

1. Attitudinal position--The Pearson product-moment correlation coefficient between 'specific attitudinal intensity' and attitudinal position on the scale of 'attitude-toward-officers' is -0.26. This ordinarily means that the linear correlation between these two variables is low, negative, and statistically significant (based on 2902 cases). It tells us that favorable attitudes toward officers have a slight tendency to be associated with lack of conviction or strength of feeling, and conversely, that unfavorable attitudes toward officers have a slight tendency to be associated with strength of conviction or deep feelings. This interpretation is correct and useful as far as it goes, but is inadequate as a description of the relation between position and intensity for this area of content.

The reason for this inadequacy will be immediately apparent from an examination of Table 6, showing the joint frequency distribution of specific intensity and position on the corresponding scale of content. The circled cells in Table 6 contain the median case in the vertical arrays. The arrangement of these median cells makes clear that the relationship between position and intensity in this instance is definitely curvilinear and may be, for convenience, fairly described

ATTITUDINAL POSITION VS. SPECIFIC INTENSITY

(Content: Attitude toward officers)

Sample: Total B

Relatively High	Content Scale Scores										Total	Percent	Cumulative Per Cent	
	←---Favorable					Unfavorable---→								
9	12	11	15	21	32	5	4	38	62	80	113	409	14.09	99.99
8	4	18	18	10	22	28	28	38	42	54	(46)	280	9.65	85.90
7	2	11	10	17	20	30	31	31	46	49	40	256	8.82	76.25
6	(6)	17	17	12	36	45	31	31	42	(54)	22	282	9.72	67.43
5	-	(11)	14	19	25	27	27	39	(44)	38	24	241	8.30	57.71
4	2	7	14	29	26	(46)	(52)	42	46	46	16	280	9.65	49.41
3	2	7	(16)	(36)	(35)	40	34	44	44	38	10	262	9.03	39.76
2	1	8	19	30	37	41	50	45	45	12	7	250	8.61	30.73
1	4	12	18	32	40	52	53	53	28	16	3	258	8.89	22.12
0	4	16	45	64	65	51	63	45	45	21	10	384	13.23	13.23
Total	37	118	186	270	338	385	429	440	408	291	2902			
Per Cent	1.27	4.07	6.41	9.30	11.65	13.27	14.78	15.16	14.06	10.03				
Cumulative Per Cent	1.27	5.34	11.75	21.05	32.70	45.97	60.75	75.91	89.97	100.00				
Median Content	.64	3.30	8.54	16.40	26.88	39.34	53.36	68.33	82.94	94.98				
Median Intensity														
Intensity Percentile	66.62	56.20	36.94	32.99	37.69	41.54	42.45	52.43	63.65	79.08				

as U-shaped. Subjecting the data in Table 6 to an analysis of variance for bivariate correlation yields conclusive evidence that the difference between the correlation ratio and the product-moment correlation coefficient is statistically significant; and that curvilinear representation of the correlation between position and intensity is more appropriate than linear representation. Table 7 summarizes this analysis of variance.

No attempt was made to fit a curve to the data at hand on the ground that the particular shape of the curve would probably vary from one set of data to another (i.e. one area of content to another) and consequently no advantage, except for the recording of the general shape of a particular curve, would be had for theory. (One such attempt, by Moberg,* to fit a curve of intensity associated with the subject matter of attitudes toward religious instruction at state universities resulted in the use of a logarithmic function.)

It will be noted that although eta-squared (η^2) is significantly greater than r^2 , it is of similar order and still quite far from unity, which is simply another justification for extending the search for factors to account for the variance in attitudinal intensity.

2. Generalized attitudinal intensity--Generalized intensity and specific intensity are linearly related to the extent of $r=.67$. When a source of spurious correlation is eliminated from the generalized intensity scores, namely the one intensity item which was included in both general and specific intensity scores, r drops to $.59$. The relationship between general intensity and specific intensity remains

*Moberg, D. O. "Attitudes toward Religions at State Institutions of Higher Learning." Master's Thesis. Univ. Washington, 1949.

TABLE 7

ANALYSIS OF VARIANCE FOR BIVARIATE CORRELATION BETWEEN
 ATTITUDINAL POSITION (on scale of 'attitude-toward-officers')
 AND SPECIFIC ATTITUDINAL INTENSITY*

Sample: Total B

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	1,888	1	1,888.00 (s_p^2)
(b) Deviation of means from line	1,615	8	201.88 (s_d^2)
(c) Between arrays	3,503	9	389.22 (s_b^2)
(d) Within arrays	23,647	2,892	8.18 (s_w^2)
(e) Residual from line	25,262	2,900	8.71 (s_r^2)
(f) Total	27,150	2,901	

$$F_1 = s_b^2/s_w^2 = 47.58 > 3.27 \quad \text{Signif. at .001 level}$$

$$F_2 = s_p^2/s_r^2 = 216.76 > 10.83 \quad \text{Signif. at .001 level}$$

$$F_3 = s_d^2/s_w^2 = 24.68 > 3.27 \quad \text{Signif. at .001 level}$$

$$r^2 = .0695 \qquad r = -.26$$

$$** \eta_{yx}^2 = .1290 \qquad \eta_{yx} = .36$$

*All tables in this report showing 'specific attitudinal intensity' refer to intensity in relation to 'attitude-toward-officers.'

**In subsequent tables the subscripts for η^2 are omitted.

relatively substantial as is shown in simple percentage form in Tables 8A and 9A. Expressing the relationship curvilinearly rather than linearly is statistically significant at the .05 level, but the curve of best fit does not have any immediately obvious distinctive shape. Analyses of variance for the bivariate correlations are summarized in Tables 8B and 9B. In expressing the relationship between specific and generalized attitudinal intensity, no advantages are immediately apparent in fitting a line other than a straight one to the observed data.

TABLE 8A.
 RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
 AND GENERALIZED ATTITUDINAL INTENSITY
 (with one intensity item in common)
 Sample: Total B

Specific attitudinal intensity scores	Generalized Attitudinal Intensity Scores			
	Relatively low (0-2)	Intermediate low (3,4)	high (5,6)	Relatively high (7,8)
Relatively high (8,9)	1%	7%	21%	64%
Intermediate high (5-7)	8	26	38	26
Intermediate low (2-4)	26	38	31	9
Relatively low (0,1)	65	29	10	1
	100%	100%	100%	100%
N =	(478)	(779)	(990)	(655)

TABLE 8B.
 ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square	
(a) Linear regression	5,839	1	5,839.00	(s_p^2)
(b) Deviation of means from line	126	8	15.75	(s_d^2)
(c) Between array means	5,965	9	662.78	(s_b^2)
(d) Within arrays	6,995	2,890	2.42	(s_w^2)
(e) Residual from line	7,121	2,900	2.46	(s_r^2)
(f) Total	12,960	2,901		

$$F_1 = s_b^2/s_w^2 = 224.08 > 3.27 \text{ Signif. at .001 level}$$

$$F_2 = s_p^2/s_r^2 = 2373.58 > 10.83 \text{ Signif. at .001 level}$$

$$F_3 = s_d^2/s_w^2 = 5.21 > 3.27 \text{ Signif. at .001 level}$$

$$r^2 = .4505 \quad r = .67$$

$$r^2 = .4603 \quad r = .68$$

TABLE 9A.

RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND GENERALIZED ATTITUDINAL INTENSITY
(with no intensity items in common)
Sample: Total B

Specific Attitudinal Intensity Scores	7-Item Generalized Attitudinal Intensity Scores			
	Relatively low (0-2)	Intermediate low (3,4)	Intermediate high (5,6)	Relatively high (7)
Relatively high (8,9)	2%	12%	31%	66%
Intermediate high (5-7)	12	29	33	25
Intermediate low (2-4)	28	35	27	8
Relatively low (0,1)	58	24	9	1
	100%	100%	100%	100%
N =	(546)	(911)	(1094)	(351)

TABLE 9B.

ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	9,346	1	9346.00 (s_p^2)
(b) Deviation of means from line	97	6	16.17 (s_d^2)
(c) Between array means	9,443	7	1349.00 (s_b^2)
(d) Within arrays	17,701	2,894	6.12 (s_w^2)
(e) Residual from line	17,798	2,900	6.14 (s_r^2)
(f) Total	27,144	2,901	

$$F_1 = s_b^2/s_w^2 = 220.42 > 3.74 \quad \text{Signif. at .001 level}$$

$$F_2 = s_p^2/s_r^2 = 1522.15 > 10.83 \quad \text{Signif. at .001 level}$$

$$F_3 = s_d^2/s_w^2 = 2.64 > 2.09 \quad \text{Signif. at .05 level}$$

$$r^2 = .3443 \quad r = .59$$

$$y^2 = .3479 \quad y = .59$$

3. Personality measures--The personality measures in relation to specific attitudinal intensity have uniformly low--not far from zero--product-moment correlation coefficients. However, these coefficients in all but one case ('depression') are significantly different from zero; which is almost, but not quite, a necessary event as a consequence of the great power of the significance test whenever there is any correlation, however small, in the universe. The correlation ratios are of course larger but again quite small, although statistically significant, except for one instance, at the .001 level.

Inspection of the relevant percentage tables, Tables 10A, 11A, 12A, and 13A, reveals in bold relief the basis for the low correlations. Nevertheless, the fact that some significant correlation, however small, is present, is inescapable. As illustrations we cite the following:

Among men with relatively low 'inferiority' scores (0-3) 30 per cent make relatively high 'specific intensity' scores (8, 9); among men with relatively high 'inferiority' scores 20 per cent make relatively high 'specific intensity' scores. As we proceed from the low scoring to the high scoring 'inferiority' groupings, we observe a steady decrease in proportion making high 'specific intensity' scores and a correspondingly steady increase in the proportion making low 'specific intensity' scores (Table 13A).

Among men with relatively low 'hypomania' scores (0-4) 30 per cent make relatively low 'specific intensity' scores (0, 1), whereas among men with relatively high 'hypomania' scores (9-12), 19 per cent make relatively low 'specific intensity' scores. (Table 10A.)

Similarly, among men with relatively low 'psychopathic deviate' scores (0-4), 30 per cent make relatively low 'specific intensity' scores; while among men with relatively high 'psychopathic deviate' scores, 20 per cent make relatively low 'specific intensity' scores. (Table 11A.)

Tables 10B-13B show analyses of variance for the bivariate correlations between each personality variable and 'specific intensity.' They tell the same story as the percentage tables, but in more precise and elegant statistical language.

TABLE 10A.
RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND HYPOMANIA SCORES

Sample: Total B

Specific attitudinal intensity scores	Hypomania Scores			
	Relatively low (0-4)	Intermediate low (5,6)	high (7,8)	Relatively high (9-12)
Relatively high (8,9)	21%	24%	23%	28%
Intermediate high (5-7)	24	25	31	26
Intermediate low (2-4)	25	27	28	27
Relatively low (0,1)	30	24	18	19
	100%	100%	100%	100%
N =	(520)	(913)	(1018)	(451)

TABLE 10B.
ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	99	1	99.00 (s_p^2)
(b) Deviation of means from line	65	8	8.12 (s_d^2)
(c) Between arrays	164	9	18.22 (s_b^2)
(d) Within arrays	12,678	2,892	4.38 (s_w^2)
(e) Residual from line	12,743	2,900	4.39 (s_r^2)
(f) Total	12,842	2,901	

$$F_1 = s_b^2/s_w^2 = 4.16 > 3.27 \text{ Signif. at } .001 \text{ level}$$

$$F_2 = s_p^2/s_r^2 = 22.55 > 10.83 \text{ Signif. at } .001 \text{ level}$$

$$F_3 = s_d^2/s_w^2 = 1.85 < 1.94 \text{ Not signif at } .05 \text{ level}$$

$$r^2 = .0077 \qquad r = .09$$

$$\eta^2 = .0128 \qquad \eta = .11$$

TABLE 11A.
RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND PSYCHOPATHIC DEVIATE SCORES

Sample: Total B

Specific attitudinal intensity scores	Psychopathic Deviate Scores			
	Relatively low (0-4)	Intermediate low (5,6)	Intermediate high (7,8)	Relatively high (9-13)
Relatively high (8,9)	18%	24%	25%	29%
Intermediate high (5-7)	26	27	27	24
Intermediate low (2-4)	26	27	29	27
Relatively low (0,1)	30	22	19	20
	100%	100%	100%	100%
N =	(577)	(1017)	(957)	(351)

TABLE 11B
ANALYSIS OF VARIANCE FOR BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	130	1	130.00 (s_p^2)
(b) Deviation of means from line	62	8	7.75 (s_d^2)
(c) Between arrays	192	9	21.33 (s_b^2)
(d) Within arrays	11,978	2,892	4.14 (s_w^2)
(e) Residual from line	12,040	2,900	4.15 (s_r^2)
(f) Total	12,170	2,901	

$$F_1 = s_b^2 / s_w^2 = 5.15 > 3.27 \quad \text{Signif. at .001 level}$$

$$F_2 = s_p^2 / s_r^2 = 31.33 > 10.83 \quad \text{Signif. at .001 level}$$

$$F_3 = s_d^2 / s_w^2 = 1.87 < 1.94 \quad \text{Not signif. at .05 level}$$

$$r^2 = .0107 \quad r = .10$$

$$\eta^2 = .0158 \quad \eta = .13$$

TABLE 12A.

RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND DEPRESSION SCORES

Sample: Total B

Specific attitudinal intensity scores	Depression Scores			
	Relatively low (0-5)	Intermediate low (6,7)	Intermediate high (8,9)	Relatively high (10-16)
Relatively high (8,9)	24%	23%	24%	24%
Intermediate high (5-7)	26	31	23	25
Intermediate low (2-4)	27	25	30	30
Relatively low (0,1)	23	23	23	21
	100%	100%	100%	100%
N =	(845)	(934)	(725)	(398)

TABLE 12B.

ANALYSIS OF VARIANCE FOR BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	24	1	.14 (s_p^2)
(b) Deviation of means from line	68	8	8.50 (s_d^2)
(c) Between array means	68	9	7.56 (s_b^2)
(d) Within arrays	17,640	2,892	6.10 (s_w^2)
(e) Residual from line	17,708	2,900	6.11 (s_r^2)
(f) Total	17,708	2,901	

$$F_1 = s_b^2 / s_w^2 = 1.24 < 1.94 \text{ Not Signif. at .05 level}$$

$$F_2 = s_p^2 / s_r^2 = .02 < 3.84 \text{ Not signif. at .05 level}$$

$$F_3 = s_d^2 / s_w^2 = 1.39 < 1.94 \text{ Not Signif. at .05 level}$$

$$r^2 = .0000 \quad r = .00$$

$$b^2 = .0038 \quad b = .06$$

TABLE 13A.

RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND INFERIORITY SCORES

Sample: Total B

Specific attitudinal intensity scores	Inferiorty Scores			
	Relatively low (0-3)	Intermediate low (4-6)	high (7-9)	Relatively high (10-15)
Relatively high (8,9)	30%	24%	22%	20%
Intermediate high (5-7)	30	26	27	23
Intermediate low (2-4)	21	30	27	31
Relatively low (0,1)	19	20	24	26
	100%	100%	100%	100%
N =	(492)	(983)	(918)	(509)

TABLE 13B.

ANALYSIS OF VARIANCE FOR BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	167	1	167.00 (s_p^2)
(b) Deviation of means from line	118	8	14.75 (s_d^2)
(c) Between arrays	284	9	31.56 (s_b^2)
(d) Within arrays	26,825	2,892	9.28 (s_w^2)
(e) Residual from line	26,942	2,900	9.29 (s_r^2)
(f) Total	27,109	2,901	

$$F_1 = s_b^2/s_w^2 = 3.40 > 3.27 \quad \text{Signif. at .001 level}$$

$$F_2 = s_p^2/s_r^2 = 17.98 > 10.83 \quad \text{Signif. at .001 level}$$

$$F_3 = s_d^2/s_w^2 = 1.59 < 1.94 \quad \text{Not signif. at .05 level}$$

$$r^2 = .0062 \quad r = -.08$$

$$\eta^2 = .0105 \quad \eta = .10$$

Correlations between the personality measures and 'generalized intensity' are of about the same order as between the personality measures and 'specific intensity,' perhaps a trifle larger.

Illustrative of the relationships with 'generalized intensity' are the following findings:

Twenty-five per cent of the men with relatively low 'hypomania' scores--as compared with 12 per cent of the men with relatively high 'hypomania' scores--are relatively low in 'generalized intensity.' (Table 14A.)

Twenty-six per cent of the men with relatively low 'psychopathic deviate' scores--as compared with 11 per cent of the men with relatively high 'psychopathic deviate' scores--are relatively low in 'generalized intensity.' (Table 15A.)

Twenty-nine per cent of the men with relatively low 'inferiority' scores -- as compared with 20 per cent of the men with relatively high 'inferiority' scores--are relatively high in 'generalized intensity.' (Table 17A.)

TABLE 14A.
RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND HYPOMANIA SCORES

Sample: Total B

Generalized Attitudinal Intensity Scores	Hypomania Scores			
	Relatively low (0-4)	Intermediate low (5,6)	high (7,8)	Relatively high (9-12)
Relatively high (7,8)	17%	23%	24%	26%
Intermediate high (5,6)	32	31	36	37
Intermediate low (3,4)	26	28	27	25
Relatively low (0-2)	25	18	13	12
	100%	100%	100%	100%
N =	(520)	(913)	(1018)	(451)

TABLE 14B.
ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	278	1	278.00 (s^2_p)
(b) Deviation of means from line	38	11	3.45 (s^2_d)
(c) Between arrays	316	12	26.33 (s^2_b)
(d) Within arrays	12,666	2,889	4.38 (s^2_w)
(e) Residual from line	12,704	2,900	4.38 (s^2_r)
(f) Total	12,982	2,901	

$$F_1 = s^2_b/s^2_w = 6.01 > 2.74 \quad \text{Signif. at .001 level}$$

$$F_2 = s^2_p/s^2_r = 63.47 > 10.83 \quad \text{Signif. at .001 level}$$

$$F_3 = s^2_d/s^2_w = .79 < 1.94 \quad \text{Not Signif. at .05 level}$$

$$r^2 = .0214 \quad r = .15$$

$$\eta^2 = .0243 \quad \eta = .16$$

TABLE 15A.
RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND PSYCHOPATHIC DEVIATE SCORES

Sample: Total B

Generalized Attitudinal Intensity Scores	Psychopathic Deviate Scores			
	Relatively low (0-4)	Intermediate low (5,6)	Intermediate high (7,8)	Relatively high (9-13)
Relatively high (7,8)	15%	24%	25%	26%
Intermediate high (5,6)	31	33	37	35
Intermediate low (3,4)	28	27	25	28
Relatively low (0-2)	26	16	13	11
	100%	100%	100%	100%
N =	(577)	(1017)	(957)	(351)

TABLE 15B.

ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	362	1	362.00 (s_p^2)
(b) Deviation of means from line	186	12	15.50 (s_d^2)
(c) Between arrays	548	13	42.15 (s_b^2)
(d) Within arrays	12,411	2,888	4.30 (s_w^2)
(e) Residual from line	12,597	2,900	4.34 (s_r^2)
(f) Total	12,959	2,901	

$F_1 = s_b^2/s_w^2 = 9.80 > 2.74$ Signif. at .001 level
 $F_2 = s_p^2/s_r^2 = 83.41 > 10.83$ Signif. at .001 level
 $F_3 = s_d^2/s_w^2 = 3.60 > 2.74$ Signif. at .001 level
 $r^2 = .0279$ $r = .17$
 $\eta^2 = .0423$ $\eta = .21$

TABLE 16A.
RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND DEPRESSION SCORES

Sample: Total B

Generalized Attitudinal Intensity Scores	Depression Scores			
	Relatively low (0-5)	Intermediate low (6,7)	Intermediate high (8,9)	Relatively high (10-16)
Relatively high (7,8)	21%	24%	23%	23%
Intermediate high (5,6)	34	35	34	32
Intermediate low (3,4)	28	26	26	28
Relatively low (0-2)	17	15	17	17
	100%	100%	100%	100%
N =	(845)	(934)	(725)	(398)

TABLE 16B.

ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	9	1	9.00 (s_p^2)
(b) Deviation of means from line	261	15	17.40 (s_d^2)
(c) Between arrays	270	16	16.88 (s_b^2)
(d) Within arrays	12,690	2,885	4.40 (s_w^2)
(e) Residual from line	12,951	2,900	4.46 (s_r^2)
(f) Total	12,960	2,901	

$$F_1 = s_b^2/s_w^2 = 3.84 > 2.74 \quad \text{Signif. at .001 level}$$

$$F_2 = s_p^2/s_r^2 = 2.02 < 3.84 \quad \text{Not Signif. at .05 level}$$

$$F_3 = s_d^2/s_w^2 = 3.95 > 2.74 \quad \text{Signif. at .001 level}$$

$$r^2 = .0007 \quad r = .03$$

$$\eta^2 = .0208 \quad \eta = .14$$

TABLE 17A.
RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND INFERIORITY SCORES

Sample: Total B

Generalized Attitudinal Intensity Scores	Inferiorty Scores			
	Relatively low (0-3)	Intermediate low (4-6)	Intermediate high (7-9)	Relatively high (10-15)
Relatively high (7,8)	29%	22%	20%	20%
Intermediate high (5,6)	33	36	35	30
Intermediate low (3,4)	23	27	29	28
Relatively low (0-2)	15	15	16	22
	100%	100%	100%	100%
N =	(492)	(983)	(918)	(509)

TABLE 17B.

ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	102	1	102.00 (s^2_p)
(b) Deviation of means from line	126	7	18.00 (s^2_d)
(c) Between arrays	228	8	28.50 (s^2_b)
(d) Within arrays	26,792	2,893	9.26 (s^2_w)
(e) Residual from line	26,910	2,900	9.28 (s^2_r)
(f) Total	27,020	2,901	

$$F_1 = s^2_b/s^2_w = 3.08 > 2.51 \quad \text{Signif. at .01 level}$$

$$F_2 = s^2_p/s^2_r = 10.99 > 10.83 \quad \text{Signif. at .001 level}$$

$$F_3 = s^2_d/s^2_w = 1.94 < 2.09 \quad \text{Not Signif. at .05 level}$$

$$r^2 = .0038 \quad r = -.06$$

$$\eta^2 = .0084 \quad \eta = .09$$

All of the correlations that have been reported were zero-order correlations. These have been exceedingly small, yet when there was statistically significant correlation, it was in the hypothesized direction. It seemed possible, therefore, that a pattern analysis of the personality variables might yield more important statistical relationships with intensity. Accordingly we performed the following operations:

Each of the personality score distributions was dichotomized at a point as close to the median as possible. From the four personality variables we were able to set up sixteen patterns according to whether men fell into the upper half or lower half of each personality score distribution. The sixteen personality patterns were then ranked according to the percentage falling above the median on 'generalized intensity,' as shown in Table 18.

These computations showed that:

The average rank of the eight upper 'hypomania' groups was higher than the average rank of the eight lower 'hypomania' groups.

The average rank of the eight upper 'psychopathic deviate' groups was higher than the average rank of the eight lower 'psychopathic deviate' groups.

The average rank of the eight upper 'inferiority' groups was higher than the average rank of the eight lower 'inferiority' groups.

There was no difference between the average rank of the eight upper 'depression' groups and the eight lower 'depression' groups.

This truncated partial correlation analysis verifies the conclusions that could be drawn on the basis of the zero-order correlations and strengthens them. With the remaining personality variables held "constant," each of the four personality variables maintained the same directional relationship with 'intensity' in the multivariate analysis as in the bivariate instance.

Upon closer examination of Table 18 we were struck by the personality pattern of the group which had the lowest proportion of men above the median of 'general intensity'--the group with the lowest 'general intensity.'

TABLE 18

RELATIONSHIPS BETWEEN GENERALIZED ATTITUDINAL INTENSITY

AND PERSONALITY SCORE PATTERNS

Sample: Total B

Pattern of Personality Scores				Number of Cases	Generalized attitudinal intensity	
Hypo- mania	Psycho- pathic deviate	Depres- sion	Infer- iority		Per cent above Median	Rank
U	U	U	L	97	62	1
U	U	L	L	276	59	2.5
L	U	L	L	162	59	2.5
U	U	U	U	141	58	4
L	U	U	L	210	54	5
U	L	L	L	301	52	6.5
U	U	L	U	165	52	6.5
U	L	L	U	339	51	8.5
U	L	U	L	40	51	8.5
L	L	U	L	117	47	10
U	L	U	U	109	44	11
L	L	U	U	224	43	12
L	L	L	U	192	42	13
L	U	U	U	185	41	14
L	U	L	U	71	40	15
L	L	L	L	272	39	16
(Mean L = 10.9 10.7 8.8 6.5 ranks)U = <u>6.1</u> <u>6.3</u> <u>8.2</u> <u>10.5</u>						
Diff.						
	4.8	4.4	0.6			-4.0

That this group was in the lower half of the 'hypomania' distribution was to be expected from the correlations, and that it was in the lower half of the 'psychopathic deviate' distribution was also to be expected from the correlations. What was unexpected was to find the lowest intensity group in the lower half of the 'inferiority' distribution-- a finding opposite from what we were led to expect from the sign of the relevant correlation coefficient. In addition, the lowest intensity group was in the lower half of the 'depression' distribution--a finding about which we had no expectation, since the correlation coefficient in this case was essentially zero. In short, the lowest intensity group of the sixteen personality patterns was characterized by a personality pattern in the lower half of the distribution of all four personality variables investigated.

The evidence thus far presented speaks for the existence of some relation between attitudinal intensity and personality. Perhaps the evidence is stronger from the pattern analysis than from the correlations with separate scores. On the other hand, the separate personality scores used have been shown not to be unidimensional scales but at best only quasi-scales, with relatively low reliability. There remained the possibility that with the not too large a pool of personality items at hand a set might be extracted which would yield a higher relationship with intensity than any of the measures thus far considered. Accordingly, we set about on a fishing expedition in the pool of 66 items.

All the personality items were of the type which presented the respondent with a statement to which, in resemblance to MMPI procedure, he was asked to respond "True" or "False." For each item, men responding "True" were compared with men responding "False" as to the

proportion making relatively high intensity scores, and also as to the proportion making relatively low intensity scores. The difference between the proportions in each case was taken as an index of the degree of relation between the personality item and the intensity score. The results of these operations are presented in Table 19A for 'generalized attitudinal intensity,' and in Table 19B for 'specific attitudinal intensity.'

No striking relationship as shown by the percentage differences was found between individual items and intensity measures, but there seemed to be enough difference here and there to warrant a more refined statistical appraisal. We are indebted to Dr. E. S. Marks* for developing a correlation formula applicable to our data. His formula for the correlation between a dichotomized item and a variable expressed in terms of ranks and allowing for ties is:

$$r_M = \frac{\bar{R}_n - \frac{N+1}{2}}{\sigma_T \sqrt{\frac{N-n}{n}}}$$

Where:

n = number of cases in the smaller of the two categories

$\bar{R}_n = \frac{\sum R}{n}$ = mean rank of cases in the smaller of the two categories

N = Total number of cases

σ_T = Standard deviation of the total

r_M has a standard error of

$$\sigma_{r_M} = \sqrt{\frac{1}{N-1}}$$

The above correlation coefficients for the personality items with the intensity variables are shown in Tables 19A and 19B.

*Dr. Marks worked out these formulae at our request, based on the reasoning presented in Kruskal, W. H. and Wallis, W. A. "Use of Ranks in One-Criterion Variance Analysis," J. Amer. Stat. Assn., December, 1952, 583-621.

TABLE 19A

RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND 66 PERSONALITY ITEMS

Sample: Total B

N = 2902

Personality items:	Relatively HIGH <u>generalized</u> attitudinal intensity (7,8)				Relatively LOW <u>generalized</u> attitudinal intensity (0-2)			* r _N
	of those answering: Per Cent "True"	"False"	Difference		of those answering: Per Cent "True"	"False"	Difference	
1	21%	25%	4%		17%	13%	4%	.080
2	23	22	1		15	18	3	-.005
3	21	24	3		21	13	8	-.084
4	21	23	2		21	14	7	-.066
5	24	22	2		15	15	0	.002
6	20	24	4		20	13	7	-.104
7	25	20	5		13	20	7	-.082
8	26	20	6		14	17	3	.109
9	21	27	6		18	11	7	.092
10	23	23	0		16	15	1	.019
11	23	22	1		15	21	6	-.033
12	19	27	8		19	12	7	.139
13	25	23	2		15	16	1	.041
14	23	23	0		16	15	1	.005
15	23	25	2		16	16	0	.018
16	23	23	0		16	16	0	.005
17	23	23	0		15	16	1	.022
18	22	25	3		16	16	0	.018
19	23	23	0		15	17	2	.023
20	23	23	0		15	16	1	.007
21	24	22	2		14	17	3	.054
22	27	22	5		14	16	2	.064
23	23	26	3		15	20	5	-.028
24	24	23	1		16	15	1	.019
25	20	25	5		20	14	6	-.060
26	22	24	2		16	15	1	.059
27	23	23	0		16	16	0	.017
28	23	22	1		15	18	3	-.031
29	24	19	5		15	20	5	-.061
30	23	24	1		14	16	2	-.013
31	23	24	1		14	19	5	-.014
32	22	25	3		17	13	4	.062
33	22	23	1		19	15	4	-.011
34	23	23	0		15	17	2	-.002
35	19	26	7		20	13	7	-.098
36	21	27	6		18	12	6	.115
37	23	23	0		15	19	4	-.036
38	22	24	2		15	16	1	.015
39	22	23	1		15	16	1	-.003

TABLE 19A - Continued

Personality items	Relatively HIGH generalized attitudinal intensity (7,8)			Relatively LOW generalized attitudinal intensity (0-2)			r
	"True"	"False"	Difference	"True"	"False"	Difference	
40	23%	22%	1%	15%	18%	3%	-.0
41	25	23	2	16	15	1	-.0
42	23	25	2	15	16	1	.0
43	23	23	0	15	17	2	-.0
44	23	23	0	16	15	1	.0
45	27	22	5	16	16	0	-.0
46	25	23	2	14	16	2	.0
47	24	23	1	15	15	0	.0
48	23	24	1	18	13	5	-.0
49	23	23	0	16	14	2	.0
50	24	22	2	15	16	1	.0
51	21	24	3	19	14	5	-.0
52	22	26	4	15	15	0	.0
53	23	23	0	17	14	3	-.0
54	22	26	4	16	15	1	.0
55	21	24	3	18	14	4	-.0
56	25	21	4	13	18	5	-.0
57	23	25	2	15	16	1	.0
58	21	24	3	23	14	9	-.0
59	23	23	0	16	16	0	.0
60	23	24	1	16	14	2	-.0
61	23	24	1	15	16	1	.0
62	23	21	2	15	17	2	-.0
63	23	24	1	16	16	0	.0
64	23	23	0	15	18	3	-.0
65	24	23	1	14	17	3	.0
66	25	23	2	13	16	3	.0

*Since $\sigma_{r_M} = .0186$, an r_M over .056 may be taken as significantly different (statistically) from zero.

TABLE 19B
RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND 66 PERSONALITY ITEMS

Sample: Total B

N = 2902

Personality items:	Relatively HIGH specific attitudinal intensity (8,9) of those answering: Per Cent			Difference	Relatively LOW specific attitudinal intensity (0,1) of those answering: Per Cent			r _M *
	"True"	"False"			"True"	"False"		
1	22%	27%	5%		24%	18%	6%	.076
2	25	22	3		21	23	2	-.015
3	20	25	5		25	20	5	-.068
4	21	25	4		26	19	7	-.066
5	24	24	0		22	21	1	-.009
6	21	26	5		24	20	4	-.067
7	26	21	5		20	24	4	-.082
8	27	21	6		20	24	4	-.074
9	22	28	6		23	19	4	.076
10	25	24	1		22	20	2	.017
11	24	22	2		21	24	3	-.017
12	21	21	0		25	18	7	.126
13	24	24	0		20	23	3	.033
14	24	24	0		22	21	1	.001
15	24	28	4		21	26	5	.011
16	24	23	1		22	23	1	-.011
17	26	23	3		22	22	0	.019
18	24	26	2		21	24	3	.013
19	23	24	1		21	22	1	-.003
20	23	24	1		22	22	0	.004
21	24	24	0		20	23	3	.037
22	27	23	4		21	22	1	.057
23	24	26	2		21	26	5	-.017
24	25	23	2		21	22	1	.029
25	21	25	4		25	20	5	-.053
26	22	26	4		23	20	3	.053
27	25	23	2		22	22	0	.022
28	24	23	1		20	23	3	-.014
29	25	21	4		20	29	9	-.055
30	23	25	2		20	23	3	.000
31	23	25	2		22	22	0	-.025
32	23	25	2		22	20	2	.054
33	27	24	3		22	21	1	.005
34	24	27	3		20	24	4	-.008
35	21	26	5		24	20	4	-.070
36	22	28	6		23	19	4	.093
37	24	25	1		20	24	4	-.006
38	23	24	1		21	22	1	-.014
39	23	24	1		23	21	2	-.012

TABLE 19B--Continued

Personality items:	Relatively HIGH specific attitudinal intensity (8,9) of those answering: Per Cent				Relatively LOW specific attitudinal intensity (0,1) of those answering: Per Cent			r_M^*
	"True"	"False"	Difference		"True"	"False"	Difference	
40	24%	22%	2%		21%	24%	3%	-.015
41	23	25	2		23	20	3	-.024
42	24	25	1		22	21	1	.022
43	24	25	1		22	19	3	.023
44	24	23	1		21	23	2	.005
45	25	22	3		21	21	0	-.005
46	24	23	1		19	22	3	.036
47	25	23	2		21	21	0	.000
48	21	26	5		26	18	8	-.056
49	24	22	2		21	21	0	-.007
50	25	23	2		21	22	1	-.009
51	20	26	6		24	20	4	-.066
52	22	27	5		23	19	4	.084
53	23	26	3		22	20	2	-.017
54	23	26	3		22	20	2	.048
55	22	25	3		23	21	2	-.043
56	25	23	2		20	22	2	-.010
57	23	27	4		21	22	1	.019
58	20	25	5		27	20	7	-.053
59	24	24	0		21	21	0	.029
60	23	25	2		22	21	1	-.024
61	25	23	2		21	22	1	.031
62	24	23	1		21	26	5	-.007
63	24	25	1		22	19	3	.010
64	24	23	1		21	23	2	-.005
65	25	23	2		20	22	2	.028
66	27	24	3		20	22	2	.009

*Since $\sigma r_M = .0186$, an r_M over .056 may be taken as significantly different (statistically) from zero.

Selection of a set of items, from the 66 items used in this study, which would have maximum correlation with intensity measures is now possible based on the obtained r_M 's. The order of magnitude of the r_M 's is so low as to discourage further analysis of this set of items in the hopes of obtaining a set highly related to attitudinal intensity. It is not to be expected that any intensity-related personality item-set resulting from any empirical item analysis procedure would have much value in many other researches. We are in only limited agreement with McNemar's point of view that "... validation item by item is usually more fruitful than attempts at validating test scores involving items scored for some purpose other than the one at hand."* "More fruitful," however, we interpret as meaning simply higher immediate correlations with no promise of such maximum correlation with other variables as might reasonably be expected were the items to be developed by rational means and tested for unidimensionality by scalogram technique, as McNemar has had occasion to recommend at another time.**

4. Status measures--All the crudely simple status measures employed here turn out to be related to attitudinal intensity. Age, educational level, length of military service, and military rank all bear small, positive, highly significant relationships (statistically), to both specific and generalized intensity.

a. Age--Older men are more intense in their attitudes than younger men. By "older" men here we of course refer to older in relation to other men in the relevant culture, namely, that of the American citizen-soldier. Obviously in other or broader cultures, such as that of the American male, our "older" men (35 years and older,

*McNemar, Q. "Review of The Prediction of Performance in Clinical Psychology by E. Lowell Kelly and Donald W. Fiske," J. Abn. Soc. Psychol., October, 1952, p. 860.

**McNemar, Q. "General Review and Summary: Opinion-Attitude Methodology," Psychol. Bull., July, 1946, pp. 355, 366, 367.

but probably under 45) could not be considered old.

A third (34 percent) or proportionately twice as many of the older men as of the younger men, men under 20, make relatively high 'specific attitudinal intensity' scores. The proportion of men making relatively high intensity scores gradually increases in successively older age groups. (Table 20.)

- b. Educational level--The relation between educational level and 'specific attitudinal intensity' is illustrated by the following fact: one-third (33 per cent) of the men who had not gone beyond grade school are relatively low in intensity as compared with one-sixth (16 per cent) of the men who had gone on to college before entering the Army. (Table 21.) In each age grouping having enough cases to make reliable analysis possible, men who have attended college are least likely to be low in intensity; men who have had only a grade school education are most likely to be low in intensity; and men who have been to high school but not to college are intermediate in intensity. (Table 22.)

The nature of the relationship with age and educational level is the same for 'generalized attitudinal intensity.' The younger grade school men and the older college men are farthest apart in attitudinal intensity--36 per cent of the former are relatively low in generalized intensity, as compared with only 9 per cent of the latter. (Table 25.)

TAELE 20

RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND AGE

Sample: Total B

Specific attitudinal intensity scores	Age				
	Under 20 years	20-24 years	25-29 years	30-34 years	35 years and over
Relatively high (8,9)	17%	23%	26%	26%	34%
Intermediate high (5-7)	24	30	25	26	23
Intermediate low (2-4)	30	29	26	26	21
Relatively low (0,1)	29	18	23	22	22
	100%	100%	100%	100%	100%
N* =	(378)	(1122)	(799)	(472)	(105)

*N adds to 2876 since age was not ascertained for 26 men.

Significance test based on original raw frequencies:

$$\chi^2_{12} = 41.85 \quad P < .001$$

TABLE 21

RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND EDUCATIONAL LEVEL

Sample: Total B

Specific attitudinal intensity scores	Educational level		
	Grade school	High school	College
Relatively high (8,9)	20%	25%	24%
Intermediate high (5-7)	21	28	28
Intermediate low (2-4)	26	27	32
Relatively low (0,1)	33	20	16
	100%	100%	100%
N* =	(523)	(1813)	(547)

*N adds to 2883 since educational level was not
ascertained for 19 men.

Significance test based on original raw frequencies:

$$\chi^2_{6} = 50.68 \quad P < .001$$

TABLE 22

RELATIONSHIP BETWEEN AGE, EDUCATIONAL LEVEL
AND A SPECIFIC ATTITUDINAL INTENSITY

Sample: Total B

Specific attitudinal intensity scores	Under 20 years			20-24 years			25-29 years			30 years and over		
	Grade sch.	High sch.	Col- lege	Grade sch.	High sch.	Col- lege	Grade sch.	High sch.	Col- lege	Grade sch.	High sch.	Col- lege
Relatively high (8,9)	18%	18%	11%	21%	25%	20%	17%	29%	26%	25%	26%	34%
Intermediate high (5-7)	18	27	21	17	31	33	24	25	24	23	25	27
Intermediate low (2-4)	24	29	45	24	27	33	25	25	31	28	26	22
Relatively low (0,1)	40	26	23	38	17	14	34	21	19	24	23	17
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N* =	(62)	(268)	(47)	(130)	(754)	(236)	(169)	(463)	(164)	(159)	(318)	(100)

*N adds to 2870 since age and educational level were not ascertained for 32 men.

Significance test based on original raw frequencies:

$$\chi^2_{33} = 111.71 \quad P \leq .001$$

TABLE 23

RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND AGE

Sample: Total B

Generalized attitudinal intensity scores	Age				
	Under 20 years	20-24 years	25-29 years	30-34 years	35 years and over
Relatively high (7,8)	16%	22%	24%	26%	33%
Intermediate high (5,6)	36	35	33	33	36
Intermediate low (3,4)	27	28	28	23	17
Relatively low (0-2)	21	15	15	18	14
	100%	100%	100%	100%	100%
N* =	(378)	(1122)	(799)	(472)	(105)

* N adds to 2876 since age was not ascertained for 26 men.

Significance test based on original raw frequencies:

$$\chi^2_{12} = 30.64 \quad .01 > P > .001$$

TABLE 24

RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND EDUCATIONAL LEVEL

Sample: Total B

Generalized attitudinal intensity scores	Educational level		
	Grade school	High school	College
Relatively high (7,8)	18%	24%	24%
Intermediate high (5,6)	28	35	38
Intermediate low (3,4)	25	27	28
Relatively low (0-2)	29	14	10
	100%	100%	100%
N* =	(523)	(1813)	(547)

*N adds to 2883 since educational level was not ascertained for 19 men.

Significance test based on original raw frequencies:

$$\chi^2_6 = 69.85 \quad P < .001$$

TABLE 25

RELATIONSHIP BETWEEN AGE, EDUCATIONAL LEVEL
AND GENERALIZED ATTITUDINAL INTENSITY

Sample: Total B

Generalized attitudinal intensity scores	Under 20 years			20-24 years			25-29 years			30 years and over		
	Grade sch.	High sch.	Col- lege	Grade sch.	High sch.	Col- lege	Grade sch.	High sch.	Col- lege	Grade sch.	High sch.	Col- lege
Relatively high (7,8)	19%	17%	9%	14%	24%	20%	21%	24%	26%	19%	28%	37%
Intermediate high (5,6)	19	38	40	31	35	38	19	36	39	35	32	36
Intermediate low (3,4)	26	26	38	21	28	31	34	27	25	21	24	18
Relatively low (0-2)	36	19	13	34	13	11	26	13	10	25	16	9
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N* =	(62)	(268)	(47)	(130)	(754)	(236)	(169)	(463)	(164)	(159)	(318)	(100)

*N adds to 2870 since age and educational level were not ascertained for 32 men.

Significance test based on original raw frequencies:

$$\chi^2_{33} = 157.64 \quad P < .001$$

- c. Length of military service--The longer men have served in the Army the less likely are they to be lacking in intensity in support of their opinions expressed in a military environment. The difference in 'specific attitudinal intensity' is most marked between men who have served not over six months and men who have served more than six months. Thirty-seven per cent of soldiers who have served six months or less are relatively low in 'specific intensity.' Among men with over two and up to three years of service 18 per cent are relatively low in 'specific intensity;' and among men with over three years of service 21 per cent are relatively low in 'specific intensity.' (Table 26.) It is as if men who had survived two or three years of military service had passed their probation period and were thence entitled to be firm in expression of their opinion. The relationship with 'generalized attitudinal intensity' is similar. (Table 27.)
- d. Military rank--Military rank, the only formal* symbol of status of the four status variables considered is, perversely, less related to attitudinal intensity than the informal indices. Twenty-seven per cent of the men without any rank, the privates, were relatively low in 'specific intensity,' as compared with 19 per cent of the non-commissioned officers. (Table 28.) There was practically no relationship between military rank and 'generalized attitudinal intensity' (Table 29), but what there was was in the same direction as for 'specific intensity' (χ^2 significant at 2% level).

*By formal we mean here symbols officially conferred on enlisted men by the Army as opposed to characteristics which the men bring with them to the Army, such as age and education, or which they acquire as a matter of course, such as length of service and again, age.

TABLE 26

RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND LENGTH OF MILITARY SERVICE

Sample: Total B

Specific attitudinal intensity scores	Length of Military Service					
	6 mos. or less	Over 6 mos. up to 1 yr.	Over 1 yr. up to 2 yrs.	Over 2 yrs. up to 3 yrs.	Over 3 yrs. up to 4 yrs.	Over 4 yrs.
Relatively high (8,9)	20%	21%	21%	27%	24%	26%
Intermediate high (5-7)	22	22	27	27	30	27
Intermediate low (2-4)	21	29	29	28	25	26
Relatively low (0,1)	37	28	23	18	21	21
	100%	100%	100%	100%	100%	100%
N* =	(160)	(334)	(614)	(884)	(737)	(157)

*N adds to 2886 since length of military service was not ascertained for 16 men.

Significance test based on original raw frequencies:

$$\chi^2_{15} = 50.33 \quad P < .001.$$

TABLE 27

RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND LENGTH OF MILITARY SERVICE

Sample: Total B

Generalized attitudinal intensity scores	Length of military service					
	6 mos. or less	Over 6 mos. up to 1 yr.	Over 1 yr. up to 2 yrs.	Over 2 yrs. up to 3 yrs.	Over 3 yrs. up to 4 yrs.	Over 4 yrs.
Relatively high (7,8)	18%	18%	22%	25%	24%	26%
Intermediate high (5,6)	31	31	36	34	34	34
Intermediate low (3,4)	28	30	28	27	26	24
Relatively low (0-2)	23	21	14	14	16	16
	100%	100%	100%	100%	100%	100%
N* =	(160)	(334)	(614)	(884)	(737)	(157)

*N adds to 2886 since length of military service was not ascertained for 16 men.

Significance test based on original raw frequencies:

$$\chi^2_{15} = 22.69 \quad .10 > P > .05$$

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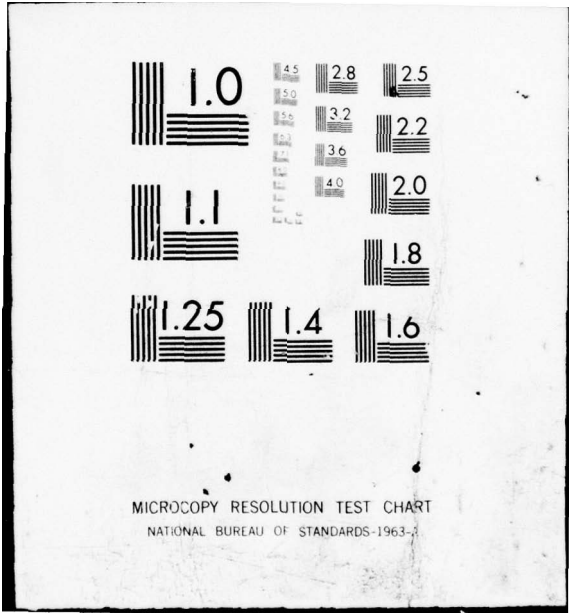
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TABLE 28

RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND MILITARY RANK

Sample: Total B

Specific attitudinal intensity scores	Military Rank		
	Private	Pfc	Noncom
Relatively high (8,9)	24%	22%	25%
Intermediate high (5-7)	23	26	29
Intermediate low (2-4)	26	28	27
Relatively low (0,1)	27	24	19
	100%	100%	100%
N* =	(622)	(719)	(1490)

*N adds to 2831 since military rank was not ascer-
tained for 71 men.

Significance test based on original raw frequencies:

$$\chi^2_6 = 22.26 \quad .01 > P > .001$$

TABLE 29

RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND MILITARY RANK

Sample: Total B

Generalized attitudinal intensity scores	Military Rank		
	Private	Pfc	Noncom
Relatively high (7,8)	22%	22%	23%
Intermediate high (5,6)	32	32	36
Intermediate low (3,4)	27	27	27
Relatively low (0-2)	19	19	14
	100%	100%	100%
N* =	(622)	(719)	(1490)

*N adds to 2831 since military rank was not ascer-
tained for 71 men.

Significance test based on original raw frequencies:

$$\chi^2_6 = 15.95 \quad .02 > P < .01$$

E. A Word about 'Lie' Scores

The 'lie' item-set was introduced in this study for the purpose of providing a safeguard against conscious distortion of responses, in addition to the usual administrative procedures for guaranteeing individual anonymity.

It was felt, in particular, that the personality items, being so highly "personal," required somewhat greater protection from distortion than the attitudinal position and intensity items, which previous experience had shown received sufficient protection under the customary methods of questionnaire administration.*

The 'lie' items used in this study are shown below. These items were intended to be so extremely worded that a person who denies having many of these symptoms may be suspected of not evaluating himself frankly.

<u>Statement</u>	<u>Responses to 'Lie' Items</u>	<u>Per Cent Saying "False" (Form B)</u>
"I get angry sometimes."		6%
"Once in a while I laugh at a dirty joke."		7
"I do not read every editorial in the newspaper every day."		11
"I would rather win than lose in a game."		12
"At times I feel like swearing."		12
"Once in a while I put off until tomorrow what I ought to do today."		15
"I do not like everyone I know."		19
"I gossip a little at times."		19
"I do not always tell the truth."		29
"Once in a while I think of things too bad to talk about."		40
"If I could get into a movie without paying and be sure I was not seen, I would probably do it."		51
"I like to know important people because it makes me feel important."		67

N = 2902

The 'lie' score is based on a count of these "False" replies. A high 'lie' score is said to be indicative of untrustworthiness of responses but not necessarily deliberate lying.

*As developed by the Research Branch, Information and Education Division, Department of the Army.

Not a single man in the B-sample of 2902 answered all twelve of the items in the 'lie' direction. Only one man in nine (11 per cent) answered as many as half the items in the 'lie' direction. The complete distribution of 'lie' scores is given below:

TABLE 30
DISTRIBUTION OF 'LIE' SCORES

Sample: Total B

Score	Frequency**	
	Number	Per cent
0	217	7%
1	537	18
2	647	22
3	543	19
4	414	14
5	267	9
6	137	5
7	75	3
8	44	2
9	16	1
10	3	*
11	2	*
12	-	-
Total	2902	100%

*Less than half of one per cent.

**See Figure 3.

The infrequency of high 'lie' scores suggested that no special treatment need be accorded the data on the basis of 'lie' scores.

'Lie' scores and 'generalized intensity' correlated to the extent of $r = .02$; 'lie' scores and 'specific intensity' correlated to the extent of $r = .03$. (Tables 31, 32.) As a source of correlation with intensity, then, 'lie' scores were unimportant.

TABLE 31A.
RELATIONSHIP BETWEEN A SPECIFIC ATTITUDINAL INTENSITY
AND LIE SCORES
Sample: Total B

Specific attitudinal intensity scores	Lie Scores			
	Relatively low (0,1)	Intermediate low (2,3)	Intermediate high (4,5)	Relatively high* (6-11)
Relatively high (8,9)	24%	22%	25%	23%
Intermediate high (5-7)	26	29	25	26
Intermediate low (2-4)	27	28	27	23
Relatively low (0,1)	23	21	23	23
	100%	100%	100%	100%
N =	(754)	(1190)	(681)	(277)

*Highest possible 'lie' score was 12, but no man made it.

TABLE 31B.
ANALYSIS OF VARIANCE FOR BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	11	1	11.00 (s^2_p)
(b) Deviation of means from line	29	8	3.63 (s^2_d)
(c) Between array means	40	9	4.44 (s^2_b)
(d) Within arrays	10,529	2,892	3.64 (s^2_w)
(e) Residual from line	10,558	2,900	3.64 (s^2_r)
(f) Total	10,569	2,901	

$$F_1 = s^2_b/s^2_w = 1.22 < 1.94 \text{ Not Signif. at .05 level}$$

$$F_2 = s^2_p/s^2_r = 3.02 < 3.84 \text{ Not Signif. at .05 level}$$

$$F_3 = s^2_d/s^2_w = 1.00 < 1.94 \text{ Not Signif. at .05 level}$$

$$r^2 = .0011 \quad r = .03$$

$$\eta^2 = .0038 \quad \eta = .06$$

TABLE 32A.
RELATIONSHIP BETWEEN GENERALIZED ATTITUDINAL INTENSITY
AND LIE SCORES

Sample: Total B

Generalized attitudinal intensity scores	Lie Scores			
	Relatively low (0,1)	Intermediate low (2,3)	Intermediate high (4,5)	Relatively high* (6,11)
Relatively high (7,8)	22%	22%	22%	28%
Intermediate high (5,6)	33	34	36	30
Intermediate low (3,4)	28	28	25	24
Relatively low (0-2)	17	16	17	18
	100%	100%	100%	100%
N =	(754)	(1190)	(681)	(277)

*Highest possible 'lie' score was 12, but no man made it.

TABLE 32B.

ANALYSIS OF VARIANCE FOR BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	41	1	41.00 (s^2_p)
(b) Deviation of means from line	91	10	9.10 (s^2_d)
(c) Between array means	132	11	12.00 (s^2_b)
(d) Within arrays	12,828	2,890	4.44 (s^2_w)
(e) Residual from line	12,919	2,900	4.45 (s^2_r)
(f) Total	12,960	2,901	

$$F_1 = s^2_b/s^2_w = 2.70 > 2.51 \quad \text{Signif. at .01 level}$$

$$F_2 = s^2_p/s^2_r = 9.21 > 6.64 \quad \text{Signif. at .01 level}$$

$$F_3 = s^2_d/s^2_w = 2.05 > 1.94 \quad \text{Signif. at .05 level}$$

$$r^2 = .0032 \quad r = .02$$

$$\eta^2 = .0102 \quad \eta = .10$$

F. Attitude-toward-Officers and Personality

There was a slight tendency for men making relatively high scores on 'psychopathic deviate' and on 'hypomania' to be less favorable toward their officers than men making relatively low scores on these personality measures. Forty-three per cent of the men scoring relatively high on 'psychopathic deviate' were unfavorable to their officers as compared with 33 per cent of the men scoring relatively low on this measure. Similarly, 43 per cent of the men scoring relatively high on 'hypomania' were unfavorable toward officers as compared with 37 per cent of the men scoring relatively low. (Tables 33A, 34A.) There was no significant relation between the 'attitude-toward-officer' scale and 'depression' scores and none between 'attitude-toward-officer' scale and 'inferiority' scores. (Tables 35A, and 36A.) It is perhaps more amusing than important to call attention to the fact that among men making relatively high 'lie' scores 10 per cent were favorable toward their officers; whereas among men making relatively low 'lie' scores, 4 per cent were favorable. (Table 37A.) In short, it does not appear highly profitable to attempt to account for any appreciable amount of variance in the military morale attitude, of attitude-toward-officers, by means of the kinds of personality measures described in the present study.

Of considerably greater importance in the understanding of enlisted men's attitude toward their officers are men's personal characteristics--age, educational level, military rank, and length of service. These have been extensively analyzed in the The American Soldier.* Suffice it to say here that favorable attitudes toward officers were most likely to be held by men with little education, and by men of low rank, and brief service in the Army. Older men tended to be more favorable than younger men. (Tables 38, 39, 40, 41.)

*See especially Studies in Social Psychology in World War II, Vol. I. Adjustment During Army Life.

TABLE 33A.

RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS
AND PSYCHOPATHIC DEVIATE SCORES

Sample: Total B

Attitude toward officers	Psychopathic Deviate Scores			
	Relatively low (0-4)	Intermediate low (5,6)	Intermediate high (7,8)	Relatively high (9-13)
Favorable (8,9)	6%	6%	4%	5%
Somewhat favorable (6,7)	20	15	15	13
Somewhat unfavorable (3-5)	41	41	38	39
Unfavorable (0-2)	33	38	43	43
	100%	100%	100%	100%
N =	(577)	(1017)	(957)	(351)

TABLE 33B.

ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear Regression	59	1	59.00 (s^2_p)
(b) Deviation of means from line	837	8	104.63 (s^2_d)
(c) Between arrays	896	9	99.56 (s^2_b)
(d) Within arrays	11,274	2,892	3.90 (s^2_w)
(e) Residual from line	12,111	2,900	4.18 (s^2_r)
(f) Total	12,170	2,901	

$$F_1 = s^2_b/s^2_w = 25.53 > 3.27 \quad \text{Signif. at .001 level}$$

$$F_2 = s^2_p/s^2_r = 14.11 > 10.83 \quad \text{Signif. at .001 level}$$

$$F_3 = s^2_d/s^2_w = 26.83 > 3.27 \quad \text{Signif. at .001 level}$$

$$r^2 = .0049 \quad r = -.07$$

$$h^2 = .0736 \quad \eta^2 = .27$$

TABLE 34A.
RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS
AND HYPOMANIA SCORES

Sample: Total B

Attitude toward officers	Hypomania Scores			
	Relatively low (0-4)	Intermediate low (5,6)	Intermediate high (7,8)	Relatively high (9-12)
Favorable (8,9)	7%	6%	4%	3%
Somewhat favorable (6,7)	16	19	15	13
Somewhat unfavorable (3-5)	40	39	40	41
Unfavorable (0-2)	37	36	41	43
	100%	100%	100%	100%
N =	(520)	(913)	(1018)	(451)

TABLE 34B.
ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	61	1	61.00 (s_p^2)
(b) Deviation of means from line	49	8	6.12 (s_d^2)
(c) Between arrays	110	9	12.22 (s_b^2)
(d) Within arrays	12,725	2,892	4.40 (s_w^2)
(e) Residual from line	12,774	2,900	4.40 (s_r^2)
(f) Total	12,835	2,901	

$$F_1 = s_b^2/s_w^2 = 2.78 > 2.51 \text{ Signif. at } .01 \text{ level}$$

$$F_2 = s_p^2/s_r^2 = 13.86 > 10.83 \text{ Signif. at } .001 \text{ level}$$

$$F_3 = s_d^2/s_w^2 = 1.39 < 1.94 \text{ Not Signif. at } .05 \text{ level}$$

$$r^2 = .0048 \quad r = -.07$$

$$\eta^2 = .0086 \quad \eta = .09$$

TABLE 35A.
RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS
AND DEPRESSION SCORES

Sample: Total B

Attitude toward officers	Depression Scores			
	Relatively low (0-5)	Intermediate low (6,7)	Intermediate high (8,9)	Relatively high (10-16)
Favorable (8,9)	7%	5%	4%	6%
Somewhat favorable (6,7)	16	16	16	11
Somewhat unfavorable (3-5)	38	38	42	44
Unfavorable (0-2)	39	41	38	39
	100%	100%	100%	100%
N =	(845)	(934)	(725)	(398)

TABLE 35B.
ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square	
(a) Linear regression	10	1	10.00	(s ² _p)
(b) Deviation of means from line	51	8	6.38	(s ² _d)
(c) Between array means	61	9	6.78	(s ² _b)
(d) Within arrays	17,647	2,892	6.10	(s ² _w)
(e) Residual from line	17,698	2,900	6.10	(s ² _r)
(f) Total	17,708	2,901		

$$F_1 = s^2_b / s^2_w = 1.11 < 1.94 \text{ Not signif. at .05 level}$$

$$F_2 = s^2_p / s^2_r = 1.64 < 3.84 \text{ Not signif. at .05 level}$$

$$F_3 = s^2_d / s^2_w = 1.05 < 1.94 \text{ Not signif. at .05 level}$$

$$r^2 = .0006 \quad r = -.02$$

$$h^2 = .0034 \quad h = .06$$

TABLE 36A

RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS
AND INFERIORITY SCORES

Sample: Total B

Attitude toward officers	Inferiurity Scores			
	Relatively low (0-3)	Intermediate low (4-6)	Intermediate high (7-9)	Relatively high (10-15)
Favorable (8,9)	6%	6%	5%	4%
Somewhat favorable (6,7)	16	17	17	12
Somewhat unfavorable (3-5)	35	39	42	42
Unfavorable (0-2)	43	38	36	42
	100%	100%	100%	100%
N =	(492)	(983)	(918)	(509)

TABLE 36B.

ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	6	1	6.00 (s_p^2)
(b) Deviation of means from line	127	8	15.88 (s_d^2)
(c) Between arrays	133	9	14.78 (s_b^2)
(d) Within arrays	26,976	2,892	9.33 (s_w^2)
(e) Residual from line	27,103	2,900	9.34 (s_r^2)
(f) Total	27,109	2,901	

$$F_1 = s_b^2/s_w^2 = 1.58 < 1.94 \text{ Not signif. at .05 level}$$

$$F_2 = s_p^2/s_r^2 = .64 < 3.84 \text{ Not signif. at .05 level}$$

$$F_3 = s_d^2/s_w^2 = 1.70 < 1.94 \text{ Not signif. at .05 level}$$

$$r^2 = .0002 \quad r = -.01$$

$$\eta^2 = .0049 \quad \eta = .07$$

TABLE 37A.
RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS
AND LIE SCORES

Sample: Total B

Attitude toward officers	Lie Scores			
	Relatively low (0,1)	Intermediate low (2,3)	Intermediate high (4,5)	Relatively high (6-11)
Favorable (8,9)	4%	5%	6%	10%
Somewhat favorable (6,7)	15	15	19	15
Somewhat unfavorable (3-5)	41	40	38	36
Unfavorable (0-2)	40	40	37	39
	100%	100%	100%	100%
N =	(754)	(1190)	(681)	(277)

TABLE 37B.
ANALYSIS OF VARIANCE OF BIVARIATE CORRELATION

Source of Variation	Sum of Squares	df	Mean Square
(a) Linear regression	35	1	35.00 (s_p^2)
(b) Deviation of means from line	40	8	5.00 (s_d^2)
(c) Between arrays	75	9	8.33 (s_b^2)
(d) Within arrays	10,494	2,892	3.63 (s_w^2)
(e) Residual from line	10,534	2,900	3.63 (s_r^2)
(f) Total	10,569	2,901	

$$F_1 = s_b^2/s_w^2 = 2.29 > 1.94 \quad \text{Signif. at .05 level}$$

$$F_2 = s_p^2/s_r^2 = 9.64 > 6.64 \quad \text{Signif. at .01 level}$$

$$F_3 = s_d^2/s_w^2 = 1.38 < 1.94 \quad \text{Not signif. at .05 level}$$

$$r^2 = .0033 \quad r = .06$$

$$r_j^2 = .0071 \quad r_j = .08$$

TABLE 38.

RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS

AND AGE

Sample: Total B

Attitude toward officers	Age				
	Under 20	20-24	25-29	30-34	35 and over
Favorable (8,9)	6%	4%	5%	8%	12%
Somewhat favorable (6,7)	21	14	14	16	20
Somewhat unfavorable (3-5)	44	39	40	40	32
Unfavorable (0-2)	29	43	41	36	36
	100%	100%	100%	100%	100%
N* =	(378)	(1122)	(799)	(472)	(105)

*N adds to 2876 since age was not ascertained for 26 men.

Significance test based on original raw frequencies:

$$\chi^2_{12} = 30.64 \quad .01 > P > .001$$

TABLE 39.
RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS
AND EDUCATIONAL LEVEL

Sample: Total B

Attitude toward officers	Educational Level		
	Grade School	High School	College
Favorable (8,9)	10%	5%	2%
Somewhat favorable (6,7)	21	15	13
Somewhat unfavorable (3-5)	38	40	38
Unfavorable (0-2)	31	40	47
	100%	100%	100%
N* =	(523)	(1813)	(547)

*N adds to 2883 since educational level was not ascertained for 19 men.

Significance test based on original raw frequencies:

$$\chi^2_6 = 50.68 \quad P < .001$$

TABLE 40.
RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS
AND MILITARY RANK

Sample: Total B

Attitude toward officers	Military Rank		
	Private	Pfc	Noncom
Favorable (8,9)	9%	4%	4%
Somewhat favorable (6,7)	21	15	13
Somewhat unfavorable (3-5)	39	41	41
Unfavorable (0-2)	31	40	42
	100%	100%	100%
N*	(622)	(719)	(1490)

* N adds to 2831 since military rank was not ascertained for 71 men.

Significance test based on original raw frequencies:

$$\chi^2_6 = 53.99 \quad P < .001$$

TABLE 41.
RELATIONSHIP BETWEEN ATTITUDE TOWARD OFFICERS
AND LENGTH OF MILITARY SERVICE

Sample: Total B

Attitude toward officers	Length of Military Service					
	6 mos. or less	Over 6 mos. up to 1 yr.	Over 1 yr. up to 2 yrs.	Over 2 yrs. up to 3 yrs.	Over 3 yrs. up to 4 yrs.	Over 4 yrs.
Favorable (8,9)	10%	11%	4%	3%	5%	6%
Somewhat favorable (6,7)	31	23	16	13	13	12
Somewhat unfavorable (3-5)	33	43	45	37	38	42
Unfavorable (0-2)	26	23	35	47	44	40
	100%	100%	100%	100%	100%	100%
N*=	(160)	(334)	(614)	(884)	(737)	(157)

*N adds to 2886 since length of military service was not ascertained for 16 men.

Significance test based on original raw frequencies:

$$\chi^2_{15} = 135.89 \quad P < .001$$

A PSYCHOLOGIC METRIC FOR ATTITUDE SCALES:

THE CONCEPT OF "ISOPATHY"

The issue with which this study began was essentially an investigation of significant sources of variation contributing to attitudinal intensity. One by-product of the study is development of the concept of "isopathy" as a psychologic metric for calibrating attitudinal content scale positions in terms of psychologically equivalent distances from the zero-point of the intensity function.

A "zero-point" for attitude scales has been proposed, as a solution to the problem of question bias in attitude-opinion research.* This zero-point is defined as that attitudinal position in a continuum which represents the point of lowest intensity or degree of conviction. Thus, persons to one side of the zero-point are said to be relatively favorable on the attitude in question and persons to the other side, relatively unfavorable. Furthermore, a zero-point so determined is held to be independent of the wording or position of questions in the attitude scale. The results of a few reported experiments have demonstrated this to be approximately so. Thus regardless of question-wording, provided that all the questions or proportions used are from the same scalable universe (and therefore, perhaps no matter who the investigator or under what auspices) an objective method is at hand for dividing a population into those who are favorable and those who are unfavorable on any issue. This method has received practical application in studies of soldier morale in the U.S. Army as well as in the studies of employee attitudes in the federal

*"Experiments on the Measurement of the Intensity Function and Zero-Point in Attitude Analysis." Report No. D-1. Research Branch, Information and Education Division, War Department (now Department of Defense), 1945.

government and in private industry.*

Notwithstanding the establishment of a zero-point for an attitude scale the question of metric has been left undetermined. One attack on the problem of dividing a population of persons classed as favorable or unfavorable by means of the zero-point into finer and more psychologically meaningful groups has been essayed by Guttman and his associates in Israel through the concepts of higher components of scale analysis, the third and fourth components of which have been named "closure" and "involution" respectively.** Assuming that these typologies are psychologically meaningful, we are still without a satisfactory metric.

We propose here a psychologic metric for attitudinal position calibrated against intensity percentiles.***

It seems to us that such a method of calibration is a natural consequence of zero-point determination. By attitudinal zero-point we have meant that attitudinal position on a scale of content which is held with the lowest median intensity. Then, persons who hold different attitudinal positions on the scale of content on either side of the zero-point with the same level of intensity may be said to be equally distant psychologically from the zero-point. We ask to be allowed to refer to such persons, in brief, as "isopaths."

*For example, employee attitude surveys done under the direction of F. H. Moore, Jr., in the Veterans' Administration, 1946-1947; by R. N. Ford for the American Telephone and Telegraph Company, 1948-1952; and by J. S. Stock, Opinion Research Corporation, 1947. See also various releases by the Israel Institute of Public Opinion for application of zero-point analysis to public opinion polls.

**Guttman, L. "The Third Component of Scalable Attitudes," International J. of Opin. and Attitude Research, 1950, 4, pp. 285-287.

***The idea for this metric arose in a discussion of this study with Dr. Cogan in the Division of Motivation and Morale, Human Resources Research Office of the George Washington University.

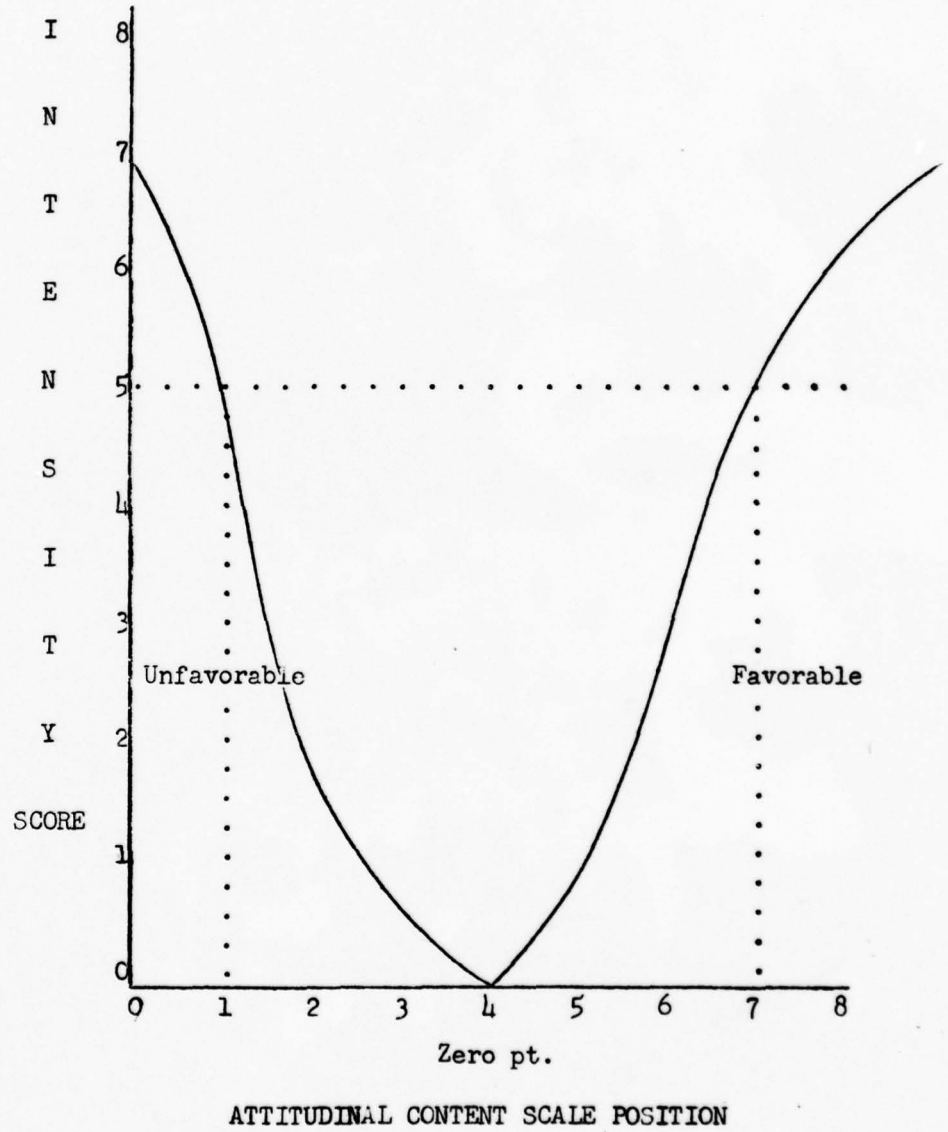
The schematic diagram below illustrates how this works in a hypothetical case. (Figure 4.) We shall assume for this example that for a given attitudinal content scale, we have nine possible positions or scores and that the frequency of these scores is rectangularly distributed. We shall assume further for this example that the intensity function on the position scale is symmetrically U-shaped and that intensity also is rectangularly distributed. None of these assumptions except a U-shape approximation, will be necessary in any actual case, however.

Let us consider that in the hypothetical case the zero-point falls at content position 4. Say a person holds position 7 (i.e., has a score of 7) on the attitude content scale and that position 7 is to the right of the zero-point or in the generally favorable group. Say further that the median intensity for those holding content position 7 is an intensity score of 5. Say now we have another person holding position 1 on the attitudinal content scale which is to the left of the zero-point, in the generally unfavorable group, and that persons holding position 1 also do so with a median intensity score of 5. In such a case, then, in which a favorable position is held with the same median intensity as an unfavorable position, the two attitudinal content scale positions may be said to be equally distant psychologically from the zero-point. In other words, position 7 on this hypothetical scale is as favorable a position as position 1 is unfavorable.

It will be noted, in passing, that to determine psychologically equal attitudinal distances it is not essential that our intensity measure have absolute reliability, any more than it is necessary for a balance to have absolute precision to determine whether two weights are the same or different from each other. We are tempted to, but cannot, bring ourselves to say that the more sensitive the measure of intensity the better. The sensitivity of

FIGURE 4

ILLUSTRATING PSYCHOLOGIC METRIC FOR AN ATTITUDE SCALE
IN A HYPOTHETICAL CASE



the measure of intensity ought merely to be appropriate for the purpose at hand--and in many studies of attitude a verbal measure of the type discussed in this report would be quite adequate. No one wants an analytical balance suitable for precise quantitative analysis in a chemical laboratory in order to weigh out five pounds of potatoes at the grocer's. For attitude assessment, all that is usually required is an intensity measure fine enough to discriminate among the various attitudinal positions on a scale of content. However, unless, and until, standard measures for intensity are developed and adopted, the particular method used for measuring attitudinal intensity should be specified in each case.

We shall proceed to apply the technique of "isopathic" analysis to an actual case of enlisted men's attitudes toward officers.

The joint distribution of scores on content and intensity for 'attitude-toward-officers' as found in this study has been presented in Table 6. Figure 5 is a graphic representation of Table 6. We learn from Figure 5 that the "zero-point" for this scale of content is in the neighborhood of content scale score 6. This means that men scoring 6 on the content scale have the lowest median intensity or hold to their opinions about officers with less conviction, on the average, than men at any other point on the scale. We say then that men scoring higher than 6 are favorable toward officers; men scoring lower than 6 are unfavorable.

Now by drawing a series of lines each of which is parallel to the abscissa at a given intensity level (we shall call each such line an "isophor") noting where the curve of the intensity function is intersected, and dropping a perpendicular from the cut-points to the abscissa, we arrive at points on the scale of content which are equal in intensity value ("isopathic") and, according to our definition, of equal psychologic distance from the attitudinal zero position.

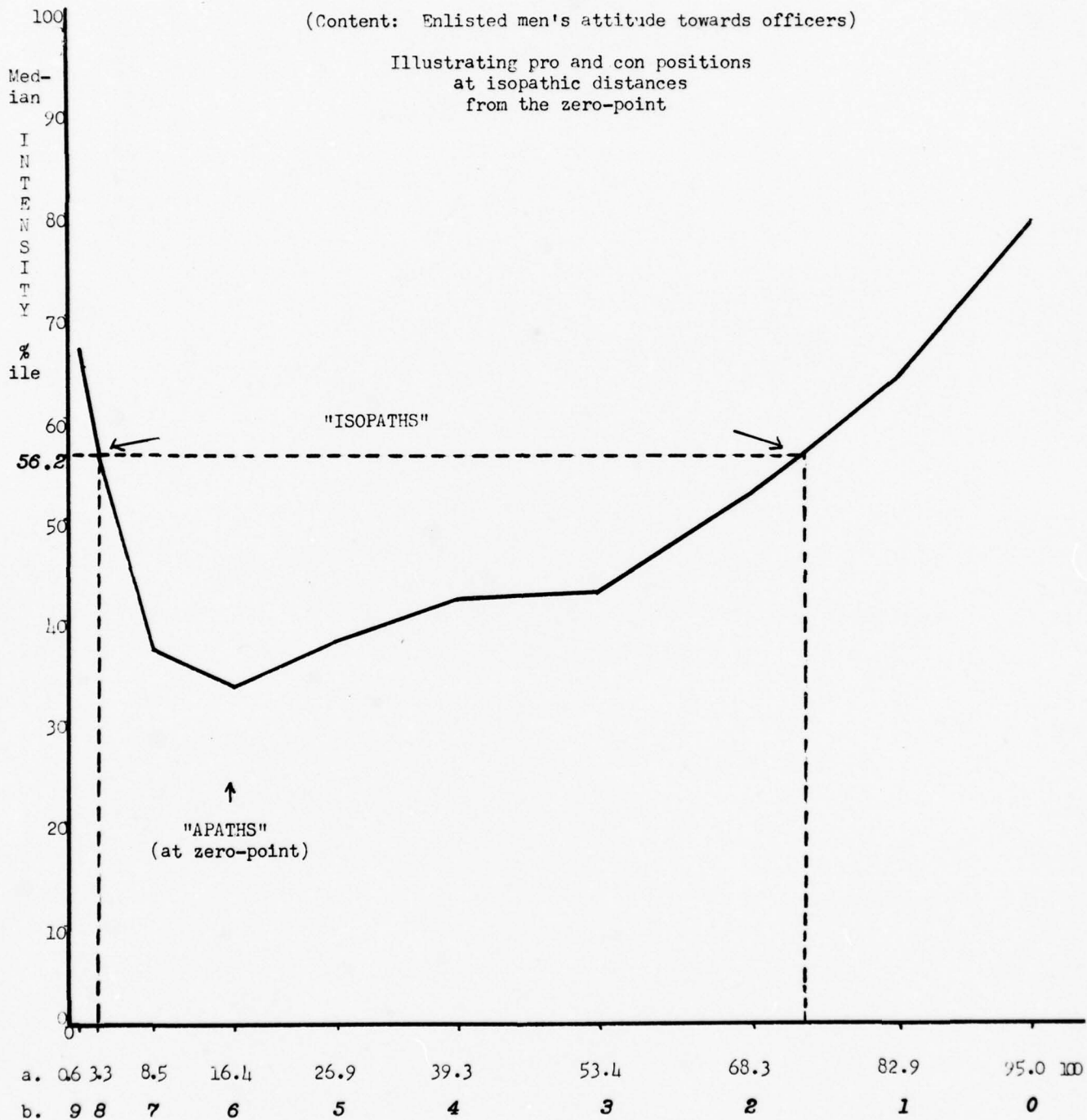
In the illustration for 'attitude-toward-officers' a median intensity level at the 56.2 percentile is reached by men scoring 8 on the favorable side

Fig. 5

ATTITUDINAL DIRECTION vs. ATTITUDINAL INTENSITY

(Content: Enlisted men's attitude towards officers)

Illustrating pro and con positions
at isopathic distances
from the zero-point



a. Median CONTENT percentile
b. Content scale score

of attitude toward officers. On the unfavorable side, men scoring 1 on the content scale have a slightly higher median intensity percentile (63.6) and men scoring 2 have a slightly lower one (52.4). Conceivably, the sample of items in the scale might have contained an item from the universe of items on attitudes toward officers which would have cut our population on the unfavorable side at the same intensity level as on the favorable side.

In the case of a perfect scale-type, a man who scores 8 makes favorable responses on all except one of the nine scale questions about officers. The one question which scale-type 8 responds to unfavorably is the question (Q12a) about whether officers always give him a "chance to ask questions as to the reasons why things were done the way they were." Scale-type 8 does not say officers "always" did. Scale-type 8 does say that: Army officers were as good as any that could have been picked; he personally respected his officers very much; most of his officers took a personal interest in their men; his officers usually gave him recognition or praised him when he did a particularly good job; his officers generally did what they could to help him most of the time; he liked his officers pretty much personally; only some of his officers used their rank in ways that seemed unnecessary to him; and generally he would rate his officers as average or better than average.

Perfect scale-type 8 described in this way we shall say is about as isopathically favorable toward his officers as perfect scale-type 1 is unfavorable. Scale-type 1 agrees that his officers are at least average, but disagrees with all other favorable assessments made by scale-type 8. Scale-type 1 agrees also with scale-type 8 in saying that his officers didn't always give him a chance to ask questions.

Scale-type 1 is on the average somewhat more intense or confident in his negative or unfavorable position than scale-type 8 is in his positive or favorable position (63.6 to 56.2 in median intensity percentile). Scale-type 2 is in agreement with scale-type 1 on all points except that scale-type

2 is more favorable toward officers in that he thinks additionally that the Army's officers were as good as any that could have been picked. Scale-type 2 is somewhat less intense or confident in his negative or unfavorable position than scale-type 8 is in his positive or favorable position (52.4 to 56.2) in median intensity percentile.

A question undoubtedly could be found or constructed which would separate out the less favorable men who fall in scale-type 2 and the more favorable men who fall in scale-type 1 such that together a new scale-type (between 1 and 2) would be exactly isopathic (of equal intensity level) on the unfavorable side with scale-type 8 on the favorable side.

CLASSIFICATION OF PERSONS ON THE BASIS OF INTERRELATION
BETWEEN ATTITUDINAL INTENSITY AND POSITION

The curve of the intensity function is drawn by joining the points for the median intensity percentiles for each median content percentile. The variation about this curve has been partially explained by 'generalized attitudinal intensity.' Partially also, but to a lesser degree, the variation has been explained by personality and status. Considerable variation remains.

There are at least these two methods of approach to the problem. One is to persist in believing that the model for the second component of scale analysis would find a better fit to the data if only our measures of attitudinal position and intensity were more free from error. This view leads to a search for more refined measures. There is of course no guarantee that better measures of attitudinal position and intensity would yield better fit to the model unless a tautological definition is used for "better" measures.*

A second approach would be to take the measures of attitudinal position and intensity as they are, accept them as reasonably good approximations of what they were set-up to measure, and become interested in the observations that deviate from the model as much as those that fall into agreement with it. In other words, we do not merely say that deviations from the curve are "errors," in that they depart from the model, but are observations of human behavior worthy of study in their own right.

*Of course other mathematical models may be tried. See for example Lazarsfeld, P. F., "The Logical and Mathematical Foundation of Latent Structure Analysis," in Stouffer, S. A. et al Measurement and Prediction, Princeton: 1950; Coombs, C. H., "Some Hypotheses for the Analysis of Qualitative Variables," Psychol. Rev., 1948, 55, 167-174; Coombs, C. H., "Psychological Scaling without a Unit of Measurement," Psychol. Rev., 1950, 57, 145-158; Coombs, C. H., "Mathematical Models in Psychological Scaling," J. Amer. Stat. Assn., 1951, 46, 480-489; and Guttman, L., "A New Approach to Factor Analysis: The Radex," and "The Theory of Facets," in Lazarsfeld, P. F. (ed.) Mathematical Thinking in the Social Sciences (to be published in 1953).

Such an approach would be in harmony with the view of the "... sane man (who) would prefer the most chaotic description of fact to the finest of false explanations."*

It is our feeling that a simultaneous attack along both lines would be worthwhile. The results of the present study are insufficient evidence to reject an hypothesis that, among groups homogeneous as to personality and status, the second component of scale analysis is an inadequate model. We do believe the evidence is suggestive of the possibility that with superior measures of personality and of status that psychologically homogeneous sub-groups in the population can be found for whom closer fit will obtain between fact and theory than has obtained heretofore. We are not entirely sanguine, however, that a very close fit will be found even with better measures. We therefore think it worthwhile for future research to turn its attention to a study of the deviations from the theoretical model as well as to its conformities.

It may prove helpful in studying the deviations to classify them in some meaningful way with respect to the relation between attitudinal position and intensity. We suggest that future research be concerned with an analysis of the differential characteristics of the following classes of persons, utilizing the intensity function as a basis of classification:

HYPERPATHS--persons whose intensity scores fall above the curve of the intensity function. Such persons may be thought of as holding to attitudinal content scale positions with greater intensity than is expected from the intensity function. In the example given for 'attitude-toward-officers,' a man who scores 3 at intensity level of the 60th percentile would be "hyperpathetic," since the median intensity percentile for men who score 3 is 42.4

*Williams, D. C., "Remarks on Causation and Compulsion," Jour. Philos., 1953, 50, p. 121.

HYPOPATHS--opposite of hyperpaths; persons whose intensity scores fall below the curve of the intensity function. Such persons may be thought of as holding to attitudinal content scale positions with less intensity than is expected from the intensity function. In the 'attitude-toward-officer' illustration, a man who scores 9 at an intensity level of the 35th percentile would be "hypopathic," since the median intensity percentile for men who score 9 is 66.2.

MESOPATHS--persons whose intensity scores can be predicted accurately from their position scores. If the second component model were a perfect fit to empirical data, all persons would be "mesopaths." In the 'attitude-toward-officer' illustration, "mesopaths" are all the men who have the following pairs of scores:

a	<u>Position</u>	score	of	9	and	an	<u>intensity</u>	score	of	6
"	"	"	"	8	and	"	"	"	"	5
"	"	"	"	7	and	"	"	"	"	3
"	"	"	"	6	and	"	"	"	"	3
"	"	"	"	5	and	"	"	"	"	3
"	"	"	"	4	and	"	"	"	"	4
"	"	"	"	3	and	"	"	"	"	4
"	"	"	"	2	and	"	"	"	"	5
"	"	"	"	1	and	"	"	"	"	6
"	"	"	"	0	and	"	"	"	"	8

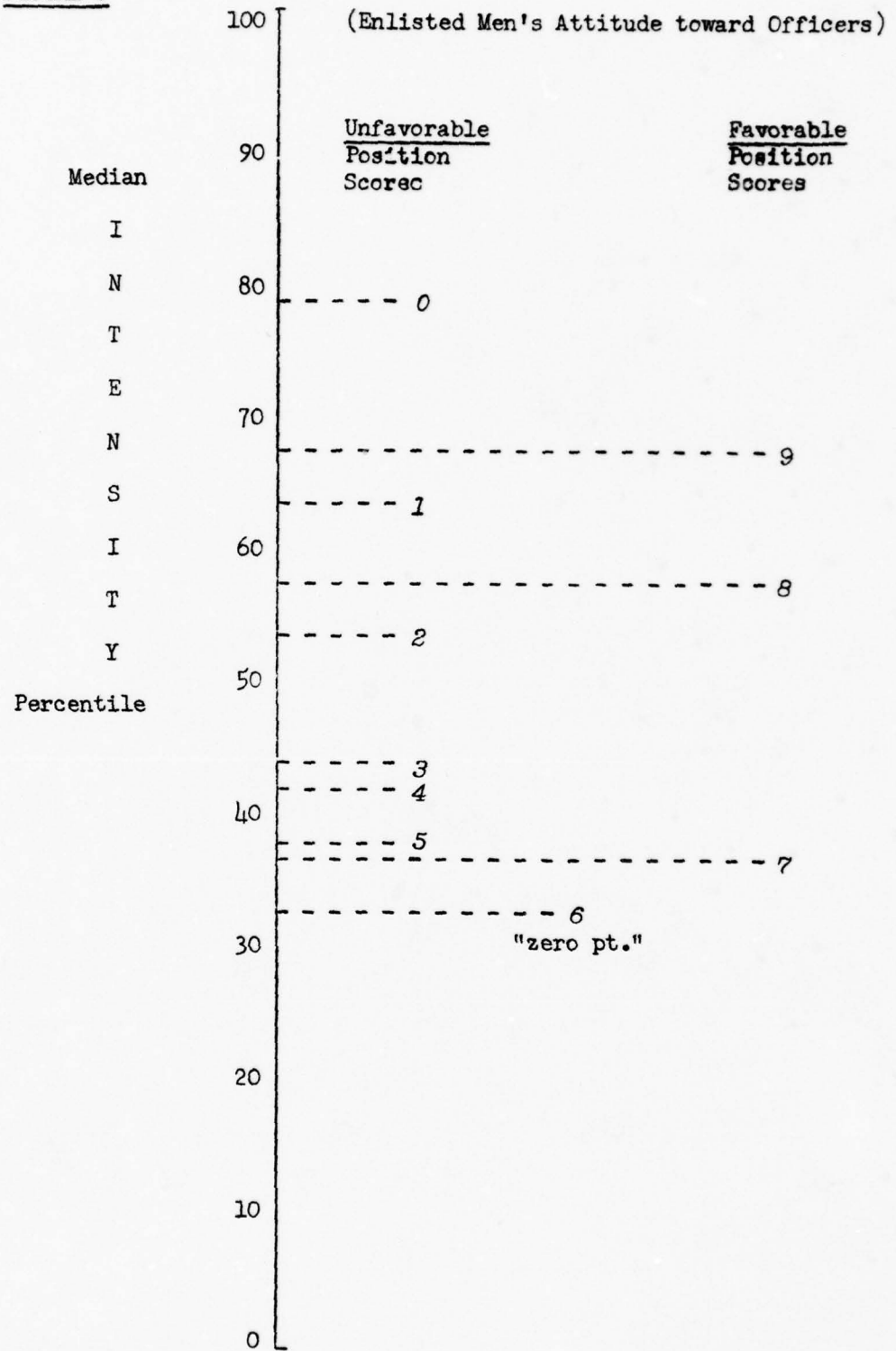
APATHS--a special class of hypopaths whose position scale score is at the zero-point. "Apaths" are not only completely neutral in their attitudinal position, but they also maintain their neutrality with less intensity than the average neutral. In the 'attitude-toward-officer' illustration again, the "apaths" are men who have a position score of 6 (zero-point) and intensity scores of 2 or less.

ISOPATHS--are persons whose intensity level is the same although they may differ in attitudinal position. Important pairs of "isopaths" are those whose isophors (lines of constant intensity level) cut the curve of the intensity function making possible a determination of equal psychologic distances from the zero-point.

Figure 6 shows in graphic form how the 'attitude-toward-officer' position scale scores appear when calibrated against the attitudinal intensity. It will be noted that the psychologic or "pathic" distances between a score of 0 and 1 is much greater than between 3 and 4. Calibration of this sort has obvious implications for studies of attitude change. One hypothesis we would entertain is that difficulty of attitude change from an attitudinal position to an adjacent one on a given content scale is directly proportional to the "pathic" distance (difference in intensity level) between the pair of adjacent scale scores. Previous experiments in attitude change have attempted to relate extremity of opinion to degree of change with mixed results. Possibly the reason for inconsistencies among such experiments is the use of attitude content scale scores in terms of an assumed absolute metric rather than an empirically determined psychologic one.

POSITION SCALE SCORES CALIBRATED AGAINST INTENSITY

FIGURE 6



CONCLUSIONS

1. The 'specific attitudinal intensity' with which men hold to an attitudinal position is partially accounted for by ---
 - a. the specific content of the attitude
 - b. a disposition to respond with intensity on a variety of attitudinal contents (generalized attitudinal intensity)
 - c. personality, as expressed by self-attitudes
 - d. status, with respect to the group in which the attitude is expressed.

2. Variation in the disposition to be generally intense in expression of attitudinal position is the most influential factor, of the four factors investigated, in accounting for the variance in 'specific attitudinal intensity.' This finding must be qualified in terms of the restricted range of attitudinal contents, with which the present study was concerned, from which the measure of 'generalized attitudinal intensity' was derived. The relationship between a 'specific attitudinal intensity' and 'generalized attitudinal intensity' is adequately represented linearly in the sample to the extent of a Pearson r of about .6.

3. A simple curvilinear function is the best representation of the relation between 'specific attitudinal intensity' and the attitudinal content upon which it is based ($\eta = .4$). This finding is in agreement with previous investigations of this subject, notably those of Cantril, and of Suchman and Guttman.

4. The relationships between the personality variables used in this study and attitudinal intensity are statistically significant, but quite small. None of the four personality measures employed was consistent with a hypothesis of unidimensionality; and with few exceptions, conventional statistical coefficients for estimating "reliability" were very low for the personality measures, in contrast to reliability coefficients for the scale of

attitudinal content and the quasi-scales of specific and generalized intensity. It must remain at present a matter of belief, rather than of demonstrated fact, that superior assessments or measures of personality would reveal greater relationships with attitudinal intensity than the ones employed in this study. One piece of evidence from the present study which bolsters this belief is the finding that a pattern analysis of personality yielded clearer relationships with attitudinal intensity than the use of any single personality measure alone.

5. The relationships between certain summary group status indices, as age, educational level, and length of service, and attitudinal intensity were also statistically significant and moderately low. All such relationships were positive, i.e. in the hypothesized direction of the higher the status in the group the greater the intensity with which attitudes were expressed. Again, it is felt that more subjective measures of status--involving status attributed by the group to the individual and recognized or concurred in by the individual himself--would magnify the relation between status and attitudinal intensity.

6. The considerable amount of variance in specific attitudinal intensity which remains unaccounted for requires a re-examination of the basic approach to the analysis of attitudinal data. The study was generated from the hypothesis that the factors studied would "serve to reduce the variance" about the curve of the intensity function. It is suggested now that in addition to the use of more refined measures of personality and status, and perhaps also of intensity, that consideration be given to a study of the deviations from the curve of the intensity function not as mere errors non-reproducible from a mathematical model but as important groupings of persons. A significant classification of persons on the basis of their relation to the intensity curve has been recommended as a point of departure for differential analysis.

7. As a by-product of the study, a psychologic metric for calibrating distances from an attitudinal zero-point was developed. The concept of "isopathy" which is derived from this metric enables us to determine equivalent positive and negative psychologic distances. It is felt that this metric can be used with profit in studies of attitude change.

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Personality Score--Inferiority (Sletto)	25
Personality Score--Lie (MMPI)	26

Man #	Scalogram Column #									Attitude toward Officers- Content		
	1	2	3	4	5	6	7	8	9	10	11	(Form B)
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95												
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8												
89												
65												

R. = .91

Man #

Scalogram Column #

Attitude toward Officers-
Intensity (Form B)

Man #	1	2	3	4	5	6	7	8	9
2									
18									
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R. = .88

II. Attitude toward Officers--Intensity Questions

(Form B)

Intensity question following each content question:

b. How strongly do you feel about this?

- 1 Not at all strongly
- 2 Not so strongly
- 3 Fairly strongly
- 4 Very strongly
- 0 N. A.

Scalogram Column Number

- 1. Question 12 b., code 4
- 2. Question 20 b., code 4
- 3. Question 17 b., code 4
- 4. Question 14 b., code 4
- 5. Question 19 b., code 4
- 6. Question 22 b., code 4
- 7. Question 21 b., code 4
- 8. Question 13 b., code 4
- 9. Question 18 b., code 4

Attitude toward Officer-Enlisted Man Relationship- Content (Form B)

Man #	Scalogram Column #	1	2	3	4	5	6	7
32								
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R. = .89

Man #	Scalogram Column #	1	2	3	4	5	6	7
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R. = .91

Man #	Scalogram Column #			Attitude toward Army- Content (Form B)
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R. = .98

Attitude toward the Army--Content Questions

(Form B)

Q. 24. When you are discharged from the Army, do you think you will go back to civilian life with a favorable or unfavorable attitude toward the officers in the Army?

- 1 ___ Very favorable
- 2 ___ Fairly favorable
- 3 ___ About 50-50
- 4 ___ Fairly unfavorable
- 5 ___ Very unfavorable
- 0 ___ N. A.

Q. 32a. Do you think the Army is run about as well as possible?

- 6 ___ It is run about as well as possible, everything considered
- 7 ___ It could be run somewhat better
- 8 ___ It could be run a lot better
- 12 ___ N. A.

Q. 33. In general, do you feel you yourself have gotten a square deal from the Army?

- 6 ___ Yes, in most ways I have
- 7 ___ In some ways, yes, in other ways, no
- 8 ___ No, on the whole I haven't gotten a square deal
- 12 ___ N. A.

Scalogram Column Number

- 1. Question 24, code 1
- 2. Question 32a., code 6
- 3. Question 33, code 6, 7

Man #

Scalogram Column #

Attitude toward Universal Military Training-
Content (Form B)

Man #	1	2	3	4	5	6	9	10	11	14	15	16	17	18	19
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R. = .92

Attitude toward Needs for Manpower (Universal Military Training)—
Content Questions

(Form B)

- Q. 25a. Now that the war is over, do you think the United States should draft all young men for a certain amount of Army training or should we go back to the regular Army system of taking volunteers only?
- 6 ___ Draft all young men for a certain amount of training
 7 ___ Go back to taking volunteers only
 8 ___ Undecided
 12 ___ N. A.
- Q. 26a. Do you think the United States could or could not have an Army sufficient for the country's needs by taking volunteers only?
- 6 ___ Yes, I'm almost sure it could
 7 ___ Yes, I think it could, but I'm not sure
 8 ___ No, it probably could not
 9 ___ No, I'm sure it could not
 12 ___ N. A.
- Q. 27a. If you had a son, would you want him to have a certain amount of Army training during peacetime, or not?
- 6 ___ Yes, I'm almost sure I would
 7 ___ Yes, I think I would, but I'm not sure
 8 ___ No, I probably would not
 9 ___ No, I'm sure I would not
 11 ___ Undecided
 12 ___ N. A.
- Q. 28a. 'Even if all other countries agree not to have large armies, the United States should still draft all young men for military training.'
- Q. 29a. 'The best way to protect the United States against another war is to make her so strong militarily that no one would dare to attack her.'
- Q. 30a. 'It is necessary for the national safety of the United States to have a large Army.'

General question preceding questions 28, 29, 30:

a. Do you agree or disagree with the following statement?

- 6 ___ Strongly agree 9 ___ Disagree
 7 ___ Agree 11 ___ Strongly disagree
 8 ___ Undecided 12 ___ N. A.

Scalogram Column Number

- | | |
|---------------------------------|---|
| 1. Question 28a., code 6 | 11. Question 27a., code 7 |
| 2. Question 30a., code 6 | 14. Question 30a., code 7, 8, 9, 11, 12 |
| 3. Question 29a., code 6 | 15. Question 27a., code 8, 9, 11 |
| 4. Question 27a., code 6 | 16. Question 26a., code 6, 7 |
| 5. Question 26a., code 8, 9 | 17. Question 25a., code 7, 8 |
| 6. Question 25a., code 6 | 18. Question 28a., code 11 |
| 9. Question 28a., code 7, 8, 9 | 19. Question 29a., code 11 |
| 10. Question 29a., code 7, 8, 9 | |

Man #

Scalogram Column #

Attitude toward Universal Military Training-
Intensity (Form B)

Man #	1	2	3	4	5	6
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R. = .89

Attitude toward Needs for Manpower (Universal Military Training)--Intensity Questions

(Form B)

Intensity question following questions 25 and 26:

b. How strongly do you feel about this?

- 6 Not at all strongly
- 7 Not so strongly
- 8 Fairly strongly
- 9 Very strongly
- 12 N. A.

Intensity question following questions 27, 28, 29, 30:

b. How hard was it for you to make this choice?

- 6 Very hard
- 7 Fairly hard
- 8 Not so hard
- 9 Not hard at all
- 12 N. A.

Scalogram Column Number

- 1. Question 30b., code 9
- 2. Question 29b., code 9
- 3. Question 27b., code 9
- 4. Question 28b., code 9
- 5. Question 26b., code 9
- 6. Question 25b., code 9

Man #

Scalogram Column #

Hypomania
(Form B)

Man #	1	2	3	4	5	6	7	8	9	10	11	12
26												
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R. = .82

Personality Scores--Hypomania (MMPI)

(Form B)

- Q. 3. I find it hard to make talk when I meet new people.
- Q. 9. I have met problems so full of possibilities that I have been unable to make up my mind about them.
- Q. 18. At times my thoughts have raced ahead faster than I could speak them.
- Q. 19. At times I have a strong urge to do something harmful or shocking.
- Q. 21. I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.
- Q. 22. I work under a great deal of tension.
- Q. 29. At times I feel that I can make up my mind with unusually great ease.
- Q. 30. When I get bored I like to stir up some excitement.
- Q. 35. When in a group of people I have trouble thinking of the right things to talk about.
- Q. 45. I sometimes keep on at a thing until others lose their patience with me.
- Q. 46. I am an important person.
- Q. 54. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.

Answer categories for questions given below:

- 1 True
- 2 False
- 0 N. A.

Scalogram Column Number

- | | |
|------------------------|-------------------------|
| 1. Question 46, code 1 | 7. Question 35, code 2 |
| 2. Question 22, code 1 | 8. Question 9, code 1 |
| 3. Question 19, code 1 | 9. Question 18, code 1 |
| 4. Question 45, code 1 | 10. Question 54, code 1 |
| 5. Question 21, code 1 | 11. Question 3, code 2 |
| 6. Question 30, code 1 | 12. Question 29, code 1 |

Man #

Scalogram Column #

Depression
(Form B)

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R. = .82

VIII. Personality Scores—Depression (MMPI)

(Form B)

- Q. 5. My judgment is better than it ever was.
- Q. 7. I am a good mixer.
- Q. 10. It takes a lot of argument to convince most people of the truth.
- Q. 14. I dream frequently about things that are best kept to myself.
- Q. 21. I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.
- Q. 22. I work under a great deal of pressure.
- Q. 23. I seem to be about as capable and smart as most others around me.
- Q. 27. At times I feel like smashing things.
- Q. 34. I usually feel that life is worth while.
- Q. 37. At times I feel like swearing.
- Q. 38. I brood a great deal.
- Q. 39. I have never felt better in my life than I do now.
- Q. 41. I find it hard to keep my mind on a task or job.
- Q. 43. I have periods in which I feel unusually cheerful without any special reason.
- Q. 45. I sometimes keep on at a thing until others lose their patience with me.
- Q. 50. Sometimes without any reason or even when things are going wrong I feel excitedly happy, 'on top of the world.'
- Q. 51. I have difficulty in starting to do things.
- Q. 53. Criticism or scolding hurts me terribly.
- Q. 55. I am certainly lacking in self-confidence.

Answer categories for questions given above:

- 1 True
- 2 False
- 0 N. A.

Scalogram Column Number

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|------------------------|-------------------------|-------------------------|
| 1. Question 34, code 2 | 8. Question 41, code 1 | 15. Question 21, code 2 |
| 2. Question 23, code 2 | 9. Question 22, code 1 | 16. Question 27, code 2 |
| 3. Question 37, code 2 | 10. Question 5, code 2 | 17. Question 45, code 2 |
| 4. Question 7, code 2 | 11. Question 10, code 2 | 18. Question 39, code 2 |
| 5. Question 43, code 2 | 12. Question 53, code 1 | 19. Question 51, code 2 |
| 6. Question 38, code 1 | 13. Question 14, code 2 | |
| 7. Question 55, code 1 | 14. Question 50, code 2 | |

Man #

Scalogram Column #

Psychopathic-Deviate
(Form B)

Man #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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R. = .80

Personality Scores--Psychopathic-Deviate (MIPI)

(Form B)

- Q. 2. My way of doing things is apt to be misunderstood by others.
- Q. 3. I find it hard to make talk when I meet new people.
- Q. 6. I wish I were not so shy.
- Q. 17. I am sure I am being talked about.
- Q. 18. At times my thoughts have raced ahead faster than I could speak them.
- Q. 26. My conduct is largely controlled by the customs of those about me.
- Q. 33. I am sure I get a raw deal from life.
- Q. 35. When in a group of people I have trouble thinking of the right things to talk about.
- Q. 41. I find it hard to keep my mind on a task or job.
- Q. 43. I have periods in which I feel unusually cheerful without any special reason.
- Q. 47. What others think of me does not bother me.
- Q. 50. Sometimes without any reason or even when things are going wrong I feel excitedly happy, 'on top of the world.'
- Q. 58. I am easily downed in an argument.
- Q. 61. I do not mind being made fun of.

Answer categories for questions given above:

- 1 True
- 2 False
- 0 N. A.

Scalogram Column Number

- | | |
|------------------------|-------------------------|
| 1. Question 33, code 1 | 8. Question 50, code 2 |
| 2. Question 43, code 2 | 9. Question 2, code 1 |
| 3. Question 41, code 1 | 10. Question 35, code 2 |
| 4. Question 18, code 2 | 11. Question 26, code 2 |
| 5. Question 17, code 1 | 12. Question 6, code 2 |
| 6. Question 61, code 2 | 13. Question 3, code 2 |
| 7. Question 47, code 2 | 14. Question 58, code 2 |

Man #	Scalogram Column #															Inferiority (Form B)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
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R. = .82

Personality Scores--Inferiority (Sletto)

(Form B)

- Q. 4. After being caught in a mistake, it is hard to do good work for a while.
- Q. 8. It is easy to express one's ideas.
- Q. 12. It is difficult to say the right thing at the right time.
- Q. 16. One can usually keep cool in important situations.
- Q. 20. It is easy to get one's own way in most situations.
- Q. 24. It is easy to ignore criticism.
- Q. 28. It is easy to act naturally in a group.
- Q. 32. It is hard to bring one's self to confide in others.
- Q. 36. It is hard to do your best when people are watching you.
- Q. 40. It is easy to get along with people.
- Q. 44. It is easy to feel as though you had a world of self-confidence.
- Q. 48. So many people do things well that it is easy to become discouraged.
- Q. 52. It is hard not to be self-conscious.
- Q. 56. It is easy to keep people from taking advantage of you.
- Q. 60. It is easy to lose confidence in one's self.

Answer categories for questions given above:

- 1 True
2 False
0 N. A.

Scalogram Column Number

- | | |
|------------------------|-------------------------|
| 1. Question 40, code 2 | 9. Question 12, code 1 |
| 2. Question 28, code 2 | 10. Question 32, code 1 |
| 3. Question 48, code 1 | 11. Question 52, code 1 |
| 4. Question 4, code 1 | 12. Question 60, code 1 |
| 5. Question 16, code 2 | 13. Question 36, code 1 |
| 6. Question 8, code 2 | 14. Question 24, code 2 |
| 7. Question 44, code 2 | 15. Question 20, code 2 |
| 8. Question 56, code 2 | |

Man #

Scalogram Column #

Lie
(Form B)

Man #	1	2	3	4	5	6	7	8	9	10	11	12
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R. = .91

Personality Scores--Lie (MMPI)

(Form B)

- Q. 11. I do not like everyone I know.
- Q. 15. I do not read every editorial in the newspaper every day.
- Q. 25. I like to know some important people because it makes me feel important.
- Q. 31. I do not always tell the truth.
- Q. 37. At times I feel like swearing.
- Q. 42. I would rather win than lose in a game.
- Q. 49. Once in a while I laugh at a dirty joke.
- Q. 57. Once in a while I put off until tomorrow what I ought to do today.
- Q. 59. Once in a while I think of things too bad to talk about.
- Q. 62. I get angry sometimes.
- Q. 64. I gossip a little at times.
- Q. 65. If I could get into a movie without paying and be sure I was not seen I would probably do it.

Answer categories for questions given above:

- 1 True
- 2 False
- 3 N. A.

Scalogram Column Number

- | | |
|------------------------|-------------------------|
| 1. Question 42, code 2 | 7. Question 57, code 2 |
| 2. Question 62, code 2 | 8. Question 64, code 2 |
| 3. Question 49, code 2 | 9. Question 31, code 2 |
| 4. Question 15, code 2 | 10. Question 59, code 2 |
| 5. Question 37, code 2 | 11. Question 65, code 2 |
| 6. Question 11, code 2 | 12. Question 25, code 2 |

Man #

Scalogram Column #

Generalized Attitudinal Intensity-
(Form B)

Man #	1	2	3	4	5	6	7	8
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R. = .85

Generalized Attitudinal Intensity

(Form B)

- Q. 11a. How do you feel about the privileges that officers get compared with those which enlisted men get?
- b. How strongly do you feel about this?
 1 ___ Not strongly at all 3 ___ Fairly strongly 0 ___ N. A.
 2 ___ Not so strongly 4 ___ Very strongly
- Q. 12a. Did your officers give you a good chance to ask questions as to the reason why things were done the way they were?
- b. How strongly do you feel about this?
 1 ___ Not at all strongly 3 ___ Fairly strongly 0 ___ N. A.
 2 ___ Not so strongly 4 ___ Very strongly
- Q. 25a. Now that the war is over, do you think the United States should draft all young men for a certain amount of Army training or should we go back to the regular Army system of taking volunteers only?
- b. How strongly do you feel about this?
 6 ___ Not at all strongly 8 ___ Fairly strongly 12 ___ N. A.
 7 ___ Not so strongly 9 ___ Very strongly
- Q. 30a. Do you agree or disagree with the following statement?
 "It is necessary for the national safety of the United States to have a large Army."
- b. How hard was it for you to make this choice?
 6 ___ Very hard 8 ___ Not so hard 12 ___ N. A.
 7 ___ Fairly hard 9 ___ Not hard at all
- Q. 31a. With which of these statements concerning post-war relations with Russia do you come closest to agreeing?
- b. How strongly do you feel about this?
 6 ___ Not at all strongly 8 ___ Fairly strongly 12 ___ N. A.
 7 ___ Not so strongly 9 ___ Very strongly
- Q. 32a. Do you think the Army is run about as well as possible?
- b. How strongly do you feel about this?
 6 ___ Not at all strongly 8 ___ Fairly strongly 12 ___ N. A.
 7 ___ Not so strongly 9 ___ Very strongly
- Q. 34a. Do you think discipline in the Army is too strict?
- b. How strongly do you feel about this?
 6 ___ Not at all strongly 8 ___ Fairly strongly 12 ___ N. A.
 7 ___ Not so strongly 9 ___ Very strongly
- Q. 35a. Do you agree or disagree with the following statement?
 "Courts martial decisions are not always fair."
- b. How hard was it for you to answer this question?
 6 ___ Very hard 7 ___ Fairly hard 8 ___ Not hard 12 ___ N. A.

Scalogram Column Number

- | | | |
|-------------------------|-------------------------|-------------------------|
| 1. Question 30b, code 9 | 4. Question 34b, code 9 | 7. Question 32b, code 9 |
| 2. Question 12b, code 4 | 5. Question 31b, code 9 | 8. Question 25b, code 9 |
| 3. Question 11b, code 4 | 6. Question 35b, code 8 | |

Man #	Scalogram Column #							Attitude toward Officer-Enlisted Man Relationship Content
	1	2	3	4	5	6	7	
43								
21								
88								
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R. = .93

Attitude toward Officer-Enlisted Man Relationship--Content Questions (Form A

- Q. 10a. 'An officer has to be very strict with his men or else they will take advantage of him.'
- 10b. 'An officer who is friendly with the enlisted men loses some of his authority over them.'
- 10c. 'An officer who really does his job, cannot expect to be popular with the men.'
- 10d. 'An officer should teach his men to obey all rules and regulations without questioning them.'
- 10e. 'An officer will lose the respect of his men if he pals around with them off-duty.'
- 10f. 'Whenever he can, the officer should let the men decide among themselves as to the best way to do a job.'

Answer categories for questions given above:

- | | |
|-------------|----------------|
| 1 ___ Agree | 3 ___ Disagree |
| 2 ___ ? | 0 ___ N. A. |

- Q. 11a. Considering their responsibilities, how do you feel about the privileges that officers get compared with those which enlisted men get?

- 1 ___ Officers have far too many privileges
- 2 ___ Officers have a few too many privileges
- 3 ___ Officers have about the right number of privileges
- 4 ___ Officers have too few privileges
- 0 ___ N. A.

Scalogram Column Number

1. Question 10f., code 2, 3
2. Question 10a., code 1, 2
3. Question 10d., code 1, 2
- ***
4. Question 10c., code 1, 2 (Non-scale Question)
5. Question 10b., code 1 (Non-scale Question)
6. Question 10e., code 1, 2 (Non-scale Question)
7. Question 11a., code 2,3,4 (Non-scale Question)

Man #	Scalogram Column #								Attitude toward the Army- (Form A) Content
	1	2	3	4	5	6	7	8	
100									
43									
93									
91									
37									
72									
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28									
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R. = .92

Attitude toward the Army--Content Questions

(Form A)

Q. 13a. All things considered, do you think the Army is run about as well as possible, or do you think it could be run better?

- 1 ___ It is run about as well as possible, everything considered
- 2 ___ It could be run somewhat better
- 3 ___ It could be run a lot better
- 0 ___ N. A.

Q. 14a. In general, do you think the Army has tried its best to see that men get as square a deal as possible?

- 1 ___ Yes, it has tried its best
- 2 ___ It has tried some but not hard enough
- 3 ___ It has hardly tried at all
- 0 ___ N. A.

Q. 15a. In general, do you feel you yourself have gotten a square deal from the Army?

- 1 ___ Yes, in most ways I have
- 2 ___ In some ways, yes, in other ways, no
- 3 ___ No, on the whole I haven't gotten a square deal
- 0 ___ N. A.

Q. 16a. Do you feel that the Army has tried its best to look out for the welfare of the enlisted men?

- 1 ___ Yes, it has tried its best
- 2 ___ It has tried some, but not hard enough
- 3 ___ It has hardly tried at all
- 0 ___ N. A.

Q. 17a. In general, how interested do you think the Army has been in your own welfare?

- 1 ___ Very much
- 2 ___ Pretty much
- 3 ___ Not so much
- 4 ___ Not at all
- 0 ___ N. A.

Q. 18a. On the whole, do you think the Army gives a man a chance to show what he can do?

- 1 ___ A very good chance
- 2 ___ A fairly good chance
- 3 ___ Not much of a chance
- 4 ___ No chance at all
- 5 ___ Undecided
- 0 ___ N. A.

Q. 19a. In general, how well do you think the Army is run?

- 1 ___ It is run very well
- 2 ___ It is run pretty well
- 3 ___ It is not run so well
- 4 ___ It is run very poorly
- 5 ___ Undecided
- 0 ___ N. A.

Q. 25a. Do you think when you are discharged you will go back to civilian life with a favorable or unfavorable attitude toward the Army?

- 1 ___ Very favorable
- 2 ___ Fairly favorable
- 3 ___ About 50-50
- 4 ___ Fairly unfavorable
- 5 ___ Very unfavorable
- 0 ___ N. A.

Scalogram Column Number

- 1. Question 17a., code 1, 2
- 2. Question 25a., code 1, 2
- 3. Question 18a., code 1, 2
- 4. Question 15a., code 1
- 5. Question 19a., code 1, 2
- ***
- 6. Question 14a., code 1 (Non-scale Question)
- 7. Question 13a., code 1 (Non-scale Question)
- 8. Question 16a., code 1 (Non-scale Question)

Man #	Scalogram Column #					Attitude toward the Army- Intensity (Form A)
	1	2	3	4	5	
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96						
100						

R. = .88

Attitude toward the Army--Intensity Questions

(Form A)

Intensity question following each content question:

b. How strongly do you feel about this?

- 1 ___ Not at all strongly
- 2 ___ Not so strongly
- 3 ___ Fairly strongly
- 4 ___ Very strongly
- 0 ___ N. A.

Scalogram Column Number

- 1. Question 19b., code 4
- 2. Question 17b., code 4
- 3. Question 15b., code 4
- 4. Question 18b., code 4
- 5. Question 25b., code 4

Man #	Scalogram Column #				Attitude toward Discipline- Content (Form A)
	1	2	3	4	
20					
65					
74					
99					
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R. = .93

Attitude toward Discipline--Content Questions

(Form A)

Q. 20a. What do you think of discipline in the Army?

- 1 ___ It's too strict but most of it is necessary
- 2 ___ It's too strict and a lot of it is unnecessary
- 3 ___ It's about right
- 4 ___ It's not strict enough
- 0 ___ N. A.

Q. 21 Do you think the Army pays too much attention, too little, or about the right amount of attention to inspections and 'spit and polish?'

- 1 ___ Too much attention
- 2 ___ About the right amount
- 3 ___ Too little attention
- 0 ___ N. A.

Q. 22 Do you think the Army pays too much attention, too little, or about the right amount of attention to military courtesies?

- 1 ___ Too much attention
- 2 ___ About the right amount
- 3 ___ Too little attention
- 0 ___ N. A.

Q. 23a. Did your officers use their rank in ways that seemed unnecessary to you?

- 1 ___ Yes, always
- 2 ___ Yes, usually
- 3 ___ Undecided
- 4 ___ No, not very often
- 5 ___ No, almost never
- 0 ___ N. A.

Q. 24 Since you have been in the Army, have you ever been punished for breaking rules or regulations?

- 1 ___ No, never
- 2 ___ Yes, once or twice
- 3 ___ Yes, several times
- 4 ___ Yes, quite a few times
- 0 ___ N. A.

Scalogram Column Number

- 1. Question 20a., code 3, 4
- 2. Question 21, code 2, 3
- 3. Question 23a., code 4, 5
- 4. Question 24, code 1
- ***
- 5. Question 22, code 2, 3 (Non-scale Question)

Man #

Scalogram Column #

Attitude toward Rules and Regulations-
Content (Form A)

93
69
26
54
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R. = .92

Attitude toward Rules and Regulations--Content Questions

(Form A)

- Q. 34a. 'A person should obey only those Army rules and regulations which seem reasonable.'
- Q. 35a. 'It is all right to get around Army rules and regulations, if you don't actually break them.'
- Q. 36a. 'Courts martial decisions are always fair.'
- Q. 37a. 'It is all right for a person to break Army rules if he doesn't get caught.'
- Q. 38a. 'In courts martial, an enlisted man will receive as fair treatment as an officer.'
- Q. 39a. 'A person who reports small violations of Army regulations is only a trouble-maker.'
- Q. 40a. 'It is difficult to break Army rules and keep your self-respect.'
- Q. 41a. 'Soldiers who break Army rules and regulations are nearly always caught and punished.'

General question following each content question:

Do you agree or disagree with this statement?

- 6 Strongly agree
7 Agree
8 Undecided
9 Disagree
11 Strongly disagree
12 N. A.

Scalogram Column Number

7. Question 38a., code 6, 7
8. Question 36a., code 6, 7, 8
9. Question 40a., code 6, 7
10. Question 41a., code 6, 7

4. Question 39a., code 9, 11 (Non-scale Question)
5. Question 37a., code 11 (Non-scale Question)
6. Question 35a., code 9, 11 (Non-scale Question)
11. Question 34a., code 9, 11 (Non-scale Question)

Man #

Scalogram Column #

Attitude toward Rules and Regulations-
Intensity (Form A)

Man #	1	2	3	4
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R. = .92

Attitude toward Rules and Regulations--Intensity Questions (Form A)

Intensity question following each content question:

b. How hard was it for you to answer this question?

- 6 Very hard
- 7 Fairly hard
- 8 Not so hard
- 9 Not hard at all
- 12 N. A.

Scalogram Column Number

- 1. Question 40b., code 9
- 2. Question 41b., code 9
- 3. Question 36b., code 9
- 4. Question 38b., code 9

Man #	Scalogram Column #			Attitude toward Dealing with Russia Content (Form A)	
	1	2	3	4	5
54					
57					
26					
140					
36					
68					
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R. = .94

Attitude toward Dealing with Russia—Content Questions (Form A)

Q. 42a. 'It is very important to keep on friendly terms with Russia, and we should make every possible effort to do so.'

6 ___ Agree 8 ___ Undecided
7 ___ Disagree 12 ___ N. A.

Q. 43a. 'It is important for the U.S. to be on friendly terms with Russia, but not so important that we should make too many concessions to her.'

6 ___ Agree 8 ___ Undecided
7 ___ Disagree 12 ___ N. A.

Q. 44a. 'If Russia wants to keep on friendly terms with us, we shouldn't discourage her, but there is no reason why we should make any special effort to be friendly.'

6 ___ Agree 8 ___ Undecided
7 ___ Disagree 12 ___ N. A.

Q. 45a. 'We shall be better off if we have just as little as possible to do with Russia.'

6 ___ Agree 8 ___ Undecided
7 ___ Disagree 12 ___ N. A.

Q. 46a. With which one of these statements concerning post-war relations with Russia do you come closest to agreeing?

- 6 ___ 'It is very important to keep on friendly terms with Russia, and we should make every possible effort to do so.'
- 7 ___ 'It is important for the U.S. to be on friendly terms with Russia, but not so important that we should make too many concessions to her.'
- 8 ___ 'If Russia wants to keep on friendly terms with us, we shouldn't discourage her, but there is no reason why we should make any special effort to be friendly.'
- 9 ___ 'We shall be better off if we have just as little as possible to do with Russia.'
- 11 ___ Don't know
- 12 ___ N. A.

Scalogram Column Number

1. Question 46a., code 8, 9
2. Question 45a., code 6
3. Question 44a., code 6
- ***
4. Question 43a., code 7 (Non-scale Question)
5. Question 42a., code 7 (Non-scale Question)

Man #

Scalogram Column #

Attitude toward Dealing with Russia-
Intensity (Form A)

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R. = .93

Attitude toward Dealing with Russia--Intensity
Questions

(Form A)

Intensity question following each content question:

b. How strongly do you feel about this?

- 6 Not at all strongly
- 7 Not so strongly
- 8 Fairly strongly
- 9 Very strongly
- 12 N. A.

Scalogram Column Number

- 1. Question 45b., code 9
- 2. Question 44b., code 9
- 3. Question 46b., code 9

Man #

Scalogram Column #

Hypomania
(Form A)

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R. = .81

Personality Score--Hypomania (MMPI)

(Form A)

- Q. 3. I find it hard to make talk when I meet new people.
- Q. 9. I have met problems so full of possibilities that I have been unable to make up my mind about them.
- Q. 18. At times my thoughts have raced ahead faster than I could speak them.
- Q. 19. At times I have a strong urge to do something harmful or shocking.
- Q. 21. I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.
- Q. 22. I work under a great deal of tension.
- Q. 29. At times I feel that I can make up my mind with unusually great ease.
- Q. 30. When I get bored I like to stir up some excitement.
- Q. 35. When in a group of people I have trouble thinking of the right things to talk about.
- Q. 45. I sometimes keep on at a thing until others lose their patience with me.
- Q. 46. I am an important person.
- Q. 54. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.

Answer categories for questions given above:

- 1 True
- 2 False
- 0 N. A.

Scalogram Column Number

- | | |
|------------------------|-------------------------|
| 1. Question 46, code 1 | 7. Question 54, code 1 |
| 2. Question 22, code 1 | 8. Question 35, code 2 |
| 3. Question 19, code 1 | 9. Question 3, code 2 |
| 4. Question 21, code 1 | 10. Question 9, code 1 |
| 5. Question 30, code 1 | 11. Question 18, code 1 |
| 6. Question 45, code 1 | 12. Question 29, code 1 |

Man #

Scalogram Column #

Depression
(Form A)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

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R. = .79

Personality Score--Depression (MMPI)

(Form A)

- Q. 5. My judgment is better than it ever was.
- Q. 7. I am a good mixer.
- Q.10. It takes a lot of argument to convince most people of the truth.
- Q.14. I dream frequently about things that are best kept to myself.
- Q.21. I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.
- Q.22. I work under a great deal of tension.
- Q.23. I seem to be about as capable and smart as most others around me.
- Q.27. At times I feel like smashing things.
- Q.34. I usually feel that life is worth while.
- Q.37. At times I feel like swearing.
- Q.38. I brood a great deal.
- Q.39. I have never felt better in my life than I do now.
- Q.41. I find it hard to keep my mind on a task or job.
- Q.43. I have periods in which I feel unusually cheerful without any special reason.
- Q.45. I sometimes keep on at a thing until others lose their patience with me.
- Q.50. Sometimes without any reason or even when things are going wrong I feel excitedly happy, 'on top of the world.'
- Q.51. I have difficulty in starting to do things.
- Q.53. Criticism or scolding hurts me terribly.
- Q.55. I am certainly lacking in self-confidence.

Answer categories for questions given above:

- 1 True
 2 False
 0 N. A.

Scalogram Column Number

- | | |
|-------------------------|-------------------------|
| 1. Question 23, code 2 | 11. Question 5, code 2 |
| 2. Question 34, code 2 | 12. Question 50, code 2 |
| 3. Question 37, code 2 | 13. Question 22, code 1 |
| 4. Question 55, code 1 | 14. Question 27, code 2 |
| 5. Question 43, code 2 | 15. Question 21, code 2 |
| 6. Question 41, code 1 | 16. Question 53, code 1 |
| 7. Question 10, code 2 | 17. Question 14, code 2 |
| 8. Question 38, code 1 | 18. Question 51, code 2 |
| 9. Question 7, code 2 | 19. Question 39, code 2 |
| 10. Question 45, code 2 | |

Man #

Scalogram Column #

Psychopathic-Deviate
(Form A)

1 2 3 4 5 6 7 8 9 D 11 12 13 14

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R. = .81

Personality Score--Psychopathic Deviate (MMPI)

(Form A)

- Q. 2. My way of doing things is apt to be misunderstood by others.
- Q. 3. I find it hard to make talk when I meet new people.
- Q. 6. I wish I were not so shy.
- Q. 17. I am sure I am being talked about.
- Q. 18. At times my thoughts have raced ahead faster than I could speak them.
- Q. 26. My conduct is largely controlled by the customs of those about me.
- Q. 33. I am sure I get a raw deal from life.
- Q. 35. When in a group of people I have trouble thinking of the right things to talk about.
- Q. 41. I find it hard to keep my mind on a task or job.
- Q. 43. I have periods in which I feel unusually cheerful without any special reason.
- Q. 47. What others think of me does not bother me.
- Q. 50. Sometimes without any reason or even when things are going wrong I feel excitedly happy, 'on top of the world.'
- Q. 58. I am easily downed in an argument.
- Q. 61. I do not mind being made fun of.

Answer categories for questions given above:

- 1 True
- 2 False
- 0 N. A.

Scalogram Column Number

- | | |
|------------------------|-------------------------|
| 1. Question 33, code 1 | 8. Question 61, code 2 |
| 2. Question 17, code 1 | 9. Question 47, code 2 |
| 3. Question 18, code 2 | 10. Question 2, code 1 |
| 4. Question 43, code 2 | 11. Question 35, code 2 |
| 5. Question 41, code 1 | 12. Question 6, code 2 |
| 6. Question 50, code 2 | 13. Question 3, code 2 |
| 7. Question 26, code 2 | 14. Question 58, code 2 |

Man #

Scalogram Column #

Inferiority
(Form A)

Man #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16															
32															
97															
54															
62															
1															
61															
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68															
46															
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81															
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93															
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65															
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86															
82															
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73															
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90															
36															
37															
85															
5															
22															
31															
77															

R. = .82

Personality Score—Inferiority (Sletto)

(Form A)

- Q. 4. After being caught in a mistake, it is hard to do good work for a while.
- Q. 8. It is easy to express one's ideas.
- Q. 12. It is difficult to say the right thing at the right time.
- Q. 16. One can usually keep cool in important situations.
- Q. 20. It is easy to get one's own way in most situations.
- Q. 24. It is easy to ignore criticism.
- Q. 28. It is easy to act naturally in a group.
- Q. 32. It is hard to bring one's self to confide in others.
- Q. 36. It is hard to do your best when people are watching you.
- Q. 40. It is easy to get along with people.
- Q. 44. It is easy to feel as though you had a world of self-confidence.
- Q. 48. So many people do things well that it is easy to become discouraged.
- Q. 52. It is hard not to be self-conscious.
- Q. 56. It is easy to keep people from taking advantage of you.
- Q. 60. It is easy to lose confidence in one's self.

Answer categories for questions given above:

- 1 True
- 2 False
- 0 N. A.

Scalogram Column Number

- | | |
|------------------------|-------------------------|
| 1. Question 40, code 2 | 9. Question 32, code 1 |
| 2. Question 28, code 2 | 10. Question 44, code 2 |
| 3. Question 16, code 2 | 11. Question 12, code 1 |
| 4. Question 4, code 1 | 12. Question 52, code 1 |
| 5. Question 48, code 1 | 13. Question 24, code 2 |
| 6. Question 60, code 1 | 14. Question 36, code 1 |
| 7. Question 8, code 2 | 15. Question 20, code 2 |
| 8. Question 56, code 2 | |

Man #	Scalogram Column #											
	1	2	3	4	5	6	7	8	9	10	11	12
37												
84												
51												
42												
59												
23												
53												
36												
66												
69												
3												
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1												
65												
20												
91												
5												
77												

Lie
(Form A)

R. = .89

Personality Score--Lie (MMPI)

(Form A)

- Q. 11. I do not like everyone I know.
- Q. 15. I do not read every editorial in the newspaper every day.
- Q. 25. I like to know some important people because it makes me feel important.
- Q. 31. I do not always tell the truth.
- Q. 37. At times I feel like swearing.
- Q. 42. I would rather win than lose in a game.
- Q. 49. Once in a while I laugh at a dirty joke.
- Q. 57. Once in a while I put off until tomorrow what I ought to do today.
- Q. 59. Once in a while I think of things too bad to talk about.
- Q. 62. I get angry sometimes.
- Q. 64. I gossip a little at times.
- Q. 65. If I could get into a movie without paying and be sure I was not seen I would probably do it.

Answer categories for questions given above:

- 1 True
- 2 False
- 0 N. A.

Scalogram Column Number

- | | |
|------------------------|-------------------------|
| 1. Question 62, code 2 | 7. Question 11, code 2 |
| 2. Question 49, code 2 | 8. Question 64, code 2 |
| 3. Question 15, code 2 | 9. Question 59, code 2 |
| 4. Question 37, code 2 | 10. Question 31, code 2 |
| 5. Question 42, code 2 | 11. Question 65, code 2 |
| 6. Question 57, code 2 | 12. Question 25, code 2 |

WHAT WE WANT YOU TO DO

1. READ EVERY QUESTION OR STATEMENT CAREFULLY TO MAKE SURE YOU UNDERSTAND IT BEFORE MAKING YOUR ANSWER.
2. MARK SOME ANSWER TO EVERY QUESTION. IF YOU HAVE ANY MORE TO SAY, ADD IT, BUT FIRST MARK ONE OF THE SUGGESTED ANSWERS.
3. IF YOU HAVE ANY QUESTIONS, RAISE YOUR HAND.
4. CHECK AND MAKE SURE YOU HAVE ANSWERED EVERY QUESTION BEFORE YOU TURN IN YOUR PAPER.

BE SURE YOU DO NOT WRITE YOUR NAME OR SERIAL
NUMBER ANYWHERE ON THE QUESTIONNAIRE

5. How long have you been in the Army? (Check one)

(Col.)	#	3			
	160	1	5	6 months or less	NOTE: If you have been in the Army before, then were out for a while, just check the length of time since you entered this last time. If you were in the National Guard, check the length of time since your outfit came into the Army.
	334	2	12	Over 6 months up to 1 year	
	614	3	21	Over 1 year up to 2 years	
(11)	884	4	30	Over 2 years up to 3 years	
	737	5	25	Over 3 years up to 4 years	
	157	6	5	Over 4 years	
	16	0	1	N. A.	

6. In what branch of the Army did you serve for the longest period of time? (Check one)

(12)	184	1-	6	Engineers	955	9-	33	Air Corps
	147	2-	5	Field Artillery	25	11-	1	Transportation Corps
	75	3-	2	Quartermaster Corps	82	-1	3	Ordnance Department
	532	4-	18	Infantry	61	-2	2	Chemical Warfare Service
(13)	123	5-	4	Medical Department	135	-3	5	Military Police
	137	6-	5	Armored Force & Tank Destroyer	86	-4	3	DEML (Station Complement)
	138	7-	5	Signal Corps	79	-5	3	Other (Which one? _____)
	114	8-	4	Coast Artillery & Anti-aircraft	29	0	1	N. A.

7. In which of the Army Forces did you serve for the longest period of time? (Check one)

(14)	989	1	34	Army Air Forces
	1183	2	41	Army Ground Forces
	670	3	23	Army Service Forces
	60	0	2	N. A.

8. Are you: (Check one)

(15)	1522	1	52	Single
	1294	2	45	Married
	51	3	2	Divorced or separated
	11	4	*	Widowed
	24	0	1	N. A.

9. How many points toward discharge do you have officially?

(16) _____ points

(17) _____ points

Tab. A

Q. 9. How many points toward discharge do you have officially?

Code

<u>#</u>		<u>%</u>	
<u>168</u>	<u>01-09</u>	<u>6</u>	<u>1-9 points</u>
<u>239</u>	<u>10-19</u>	<u>8</u>	<u>10-19 points</u>
<u>330</u>	<u>20-29</u>	<u>11</u>	<u>20-29 points</u>
<u>715</u>	<u>30-39</u>	<u>25</u>	<u>30-39 points</u>
<u>626</u>	<u>40-49</u>	<u>22</u>	<u>40-49 points</u>
<u>392</u>	<u>50-59</u>	<u>14</u>	<u>50-59 points</u>
<u>222</u>	<u>60-69</u>	<u>8</u>	<u>60-69 points</u>
<u>41</u>	<u>70-79</u>	<u>1</u>	<u>70-79 points</u>
<u>37</u>	<u>80-89</u>	<u>1</u>	<u>80-89 points</u>
<u>20</u>	<u>90-99</u>	<u>1</u>	<u>90-99 points</u>
<u>5</u>	<u>X0-X9</u>	<u>*</u>	<u>100-109 points</u>
<u>4</u>	<u>Y0-Y9</u>	<u>*</u>	<u>110-119 points</u>
<u>4</u>	<u>X-X</u>	<u>*</u>	<u>120 points and over</u>
<u>2</u>	<u>Y-Y</u>	<u>*</u>	<u>Don't know</u>
<u>97</u>	<u>0-0</u>	<u>3</u>	<u>N. A.</u>

PART I

10. Here are some statements made about officers and their jobs. You will find that you agree with some and disagree with others.

If you agree with the statement, draw a circle around the word "AGREE" which comes after the statement -- like this, AGREE. If you disagree, draw a circle around the word "DISAGREE" -- like this, DISAGREE. If you are in doubt or just can't make up your mind, draw a circle around the question-mark "?" -- like this, ?.

There are no right or wrong answers. We want your own opinion -- what you personally agree or disagree with.

(Col.)		1	2	3	4
(18)	a. "Whenever he can, the officer should let the men decide among themselves as to the best way to do a job."	80 AGREE 2336	3 ? 77	16 DISAGREE 468	1 N.A. 21
(19)	b. "An officer will lose the respect of his men if he pals around with them off-duty."	18 AGREE 514	4 ? 126	77 DISAGREE 2235	1 N.A. 27
(20)	c. "An officer should teach his men to obey all rules and regulations without questioning them."	48 AGREE 1392	6 ? 160	45 DISAGREE 1314	1 N.A. 36
(21)	d. "An officer who really does his job, cannot expect to be popular with his men."	14 AGREE 418	3 ? 75	82 DISAGREE 2373	1 N.A. 36
(22)	e. "An officer who is friendly with the enlisted men loses some of his authority over them."	13 AGREE 372	3 ? 77	83 DISAGREE 2410	1 N.A. 43
(23)	f. "An officer has to be very strict with his men or else they will take advantage of him."	18 AGREE 518	3 ? 99	77 DISAGREE 2232	2 N.A. 53

11. (a) How do you feel about the privileges that officers get compared with those which enlisted men get? (Check one)

	#	%	
(24)	1684	1	58 Officers have <u>far too many</u> privileges
	795	2	27 Officers have <u>a few too many</u> privileges
	369	3	13 Officers have <u>about the right number</u> of privileges
	22	4	1 Officers have <u>too few</u> privileges
	32	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

(25)	185	1	6 Not strongly at all
	264	2	9 Not so strongly
	830	3	29 Fairly strongly
	1591	4	55 Very strongly
	32	0	1 N. A.

PART II

NOW, THINK OF ALL THE DIFFERENT OFFICERS YOU HAVE EVER HAD. WHAT DID YOU THINK OF THEM, AS A WHOLE? ANSWER EACH OF THE FOLLOWING QUESTIONS ABOUT THEM.

12. (a) Did your officers give you a good chance to ask questions as to the reason why things were done the way they were? (Check one)
- | | | | |
|--------|------|---|-----------------------|
| (Col.) | # | % | |
| | 254 | 1 | 9 Yes, always |
| | 921 | 2 | 32 Yes, usually |
| | 147 | 3 | 5 Undecided |
| (26) | 1073 | 4 | 37 No, not very often |
| | 486 | 5 | 17 No, almost never |
| | 21 | 0 | * N. A. |

- (b) How strongly do you feel about this? (Check one)
- | | | | |
|------|------|---|-----------------------|
| | 169 | 1 | 6 Not at all strongly |
| | 337 | 2 | 12 Not so strongly |
| (27) | 1047 | 3 | 36 Fairly strongly |
| | 1308 | 4 | 45 Very strongly |
| | 41 | 0 | 1 N. A. |

13. (a) How many of your officers took a personal interest in their men? (Check one)
- | | | | |
|------|------|---|-----------------------|
| | 82 | 1 | 3 All of them |
| | 568 | 2 | 19 Most of them |
| | 643 | 3 | 22 About half of them |
| (28) | 1427 | 4 | 49 Few of them |
| | 163 | 5 | 6 None of them |
| | 19 | 0 | 1 N. A. |

- (b) How strongly do you feel about this? (Check one)
- | | | | |
|------|------|---|-----------------------|
| | 110 | 1 | 4 Not at all strongly |
| | 244 | 2 | 8 Not so strongly |
| (29) | 947 | 3 | 33 Fairly strongly |
| | 1571 | 4 | 54 Very strongly |
| | 30 | 0 | 1 N. A. |

14. (a) Do you think that your officers generally did what they could to help you? (Check one)
- | | | | |
|------|------|---|------------------------------|
| | 123 | 1 | 4 Yes, all the time |
| (30) | 1253 | 2 | 43 Yes, most of the time |
| | 1180 | 3 | 41 No, they often did not |
| | 328 | 4 | 11 No, they almost never did |
| | 18 | 0 | 1 N. A. |

- (b) How strongly do you feel about this? (Check one)
- | | | | |
|------|------|---|-----------------------|
| | 109 | 1 | 4 Not at all strongly |
| | 277 | 2 | 10 Not so strongly |
| (31) | 1080 | 3 | 37 Fairly strongly |
| | 1404 | 4 | 48 Very strongly |
| | 32 | 0 | 1 N. A. |

15. (a) How well do you feel that your officers understood your problems and needs? (Check one)

(Col.)	#	%	
	202	1	10 They were very much aware of my problems and needs
(32)	1121	2	39 They were fairly well aware of my problems and needs
	1459	3	50 They did not know very much about my real problems and needs
	40	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	165	1	6 Not at all strongly
	281	2	10 Not so strongly
(33)	1032	3	35 Fairly strongly
	1385	4	48 Very strongly
	39	0	1 N. A.

16. (a) Do you feel that your officers recognized your abilities and what you were able to do? (Check one)

	539	1	18 Yes, I'm sure they did
	700	2	24 Yes, I think they did, but I'm not sure
(34)	1352	3	47 No, I don't think they did
	289	4	10 Undecided
	22	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	191	1	7 Not at all strongly
	301	2	10 Not so strongly
(35)	939	3	32 Fairly strongly
	1423	4	49 Very strongly
	48	0	2 N. A.

17. (a) In general, how good would you say your officers were? (Check one)

	218	1	7 Very good
	754	2	26 Fairly good
(36)	1213	3	42 About average
	458	4	16 Pretty poor
	224	5	8 Very poor
	35	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	144	1	5 Not at all strongly
	262	2	9 Not so strongly
(37)	1030	3	36 Fairly strongly
	1430	4	49 Very strongly
	36	0	1 N. A.

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NATIONAL OPINION RESEARCH CENTER CHICAGO IL
ATTITUDINAL INTENSITY IN RELATION TO PERSONALITY AND STATUS IN --ETC(U)
MAY 53 J ELINSON

F/G 5/10

UNCLASSIFIED

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3 of 3

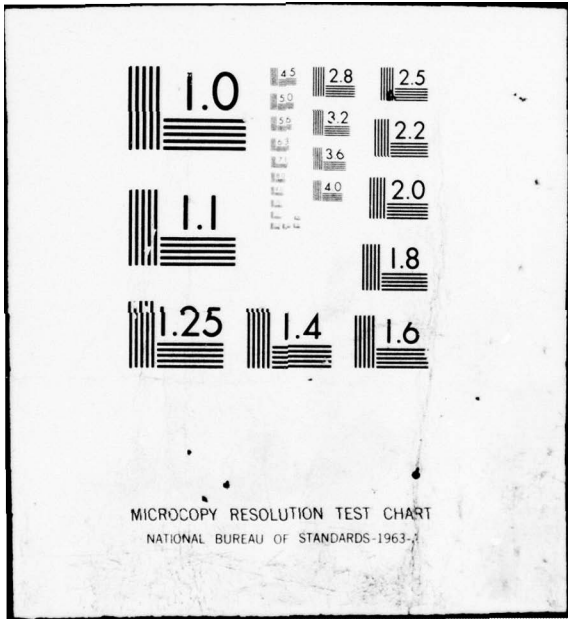
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

18. (a) How many of your officers used their rank in ways that seemed unnecessary to you? (Check one)

(Col.)	#	%	
	322	1	11 Almost all of them
	577	2	20 Most of them
	1090	3	38 Some of them
(38)	762	4	26 Only a few of them
	128	5	4 None of them
	23	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	121	1	4 Not at all strongly
	266	2	9 Not so strongly
(39)	858	3	30 Fairly strongly
	1626	4	56 Very strongly
	31	0	1 N. A.

19. (a) When you did a particularly good job did you usually get recognition or praise for it from your officers? (Check one)

	92	1	3 Always
	764	2	26 Usually
(40)	1449	3	50 Rarely
	569	4	20 Never
	28	0	1 N.A.

(b) How strongly do you feel about this? (Check one)

	192	1	7 Not at all strongly
	289	2	10 Not so strongly
(41)	846	3	29 Fairly strongly
	1539	4	53 Very strongly
	36	0	1 N.A.

20. (a) How much did you personally like your officers? (Check one)

	207	1	7 Very much
	1182	2	41 Pretty much
(42)	1205	3	41 Not so much
	259	4	9 Not at all
	49	0	2 N. A.

(b) How strongly do you feel about this? (Check one)

	170	1	6 Not at all strongly
	314	2	11 Not so strongly
(43)	1089	3	37 Fairly strongly
	1292	4	45 Very strongly
	37	0	1 N. A.

21. (a) How do you feel about the officers that had been selected by the Army? (Check one)

(Col.)	#	%	
	81	1	3 They were the best ones that could have been picked
	575	2	20 They were as good as any that could have been picked
(44)	1173	3	40 Somewhat better ones could have been picked
	787	4	27 Much better ones could have been picked
	255	5	9 Undecided
	31	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	165	1	6 Not at all strongly
	222	2	7 Not so strongly
(45)	899	3	31 Fairly strongly
	1557	4	54 Very strongly
	59	0	2 N. A.

22. (a) How much did you personally respect your officers? (Check one)

	659	1	23 Very much
	1159	2	40 Pretty much
(46)	808	3	28 Not so much
	244	4	8 Not at all
	32	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	134	1	5 Not at all strongly
	251	2	9 Not so strongly
(47)	936	3	32 Fairly strongly
	1547	4	53 Very strongly
	34	0	1 N. A.

23. On the basis of your Army experience, do you think relations between officers and enlisted men were satisfactory or unsatisfactory? (Check one)

	234	1	8 Very satisfactory
	1016	2	35 Fairly satisfactory
	384	3	13 Undecided
(48)	639	4	22 Fairly unsatisfactory
	601	5	21 Very unsatisfactory
	28	0	1 N. A.

24. When you are discharged from the Army, do you think you will go back to civilian life with a favorable or unfavorable attitude toward the officers in the Army? (Check one)

	179	1	6 Very favorable
	452	2	16 Fairly favorable
(49)	1128	3	39 About 50-50
	455	4	16 Fairly unfavorable
	652	5	22 Very unfavorable
	36	0	1 N. A.

PART III

THE FOLLOWING QUESTIONS ARE ABOUT POST-WAR MILITARY TRAINING

25. (a) Now that the war is over, do you think the United States should draft all young men for a certain amount of Army training or should we go back to the regular Army system of taking volunteers only? (Check one)
- | | | | |
|--------|------|----|---|
| (Col.) | # | % | |
| | 1771 | 6 | 61 Draft all young men for a certain amount of training |
| | 838 | 7 | 29 Go back to taking volunteers only |
| (18) | 271 | 8 | 9 Undecided |
| | 22 | 12 | 1 N. A. |
- (b) How strongly do you feel about this? (Check one)
- | | | | |
|------|------|----|-----------------------|
| (19) | 107 | 6 | 4 Not at all strongly |
| | 160 | 7 | 5 Not so strongly |
| | 508 | 8 | 17 Fairly strongly |
| | 2076 | 9 | 72 Very strongly |
| | 51 | 12 | 2 N. A. |
26. (a) Do you think the United States could or could not have an Army sufficient for the country's needs by taking volunteers only? (Check one)
- | | | | |
|------|-----|----|--|
| (20) | 821 | 6 | 28 Yes, I'm almost sure it could |
| | 707 | 7 | 24 Yes, I think it could, but I'm not sure |
| | 917 | 8 | 32 No, it probably could not |
| | 432 | 9 | 15 No, I'm sure it could not |
| | 25 | 12 | 1 N. A. |
- (b) How strongly do you feel about this? (Check one)
- | | | | |
|------|------|----|-----------------------|
| (21) | 56 | 6 | 2 Not at all strongly |
| | 228 | 7 | 8 Not so strongly |
| | 956 | 8 | 33 Fairly strongly |
| | 1628 | 9 | 56 Very strongly |
| | 34 | 12 | 1 N. A. |
27. (a) If you had a son, would you want him to have a certain amount of Army training during peacetime, or not? (Check one)
- | | | | |
|------|------|----|---|
| (22) | 1269 | 6 | 44 Yes, I'm almost sure I would |
| | 504 | 7 | 17 Yes, I think I would, but I'm not sure |
| | 328 | 8 | 11 No, I probably would not |
| | 631 | 9 | 22 No, I'm sure I would not |
| | 144 | 11 | 5 Undecided |
| | 26 | 12 | 1 N. A. |
- (b) How hard was it for you to make this choice? (Check one)
- | | | | |
|------|------|----|--------------------|
| (23) | 359 | 6 | 12 Very hard |
| | 543 | 7 | 19 Fairly hard |
| | 667 | 8 | 23 Not so hard |
| | 1305 | 9 | 45 Not hard at all |
| | 28 | 12 | 1 N. A. |

28. (a) Do you agree or disagree with the following statement?

"Even if all other countries agree not to have large armies, the United States should still draft all young men for military training." (Check one)

(Col.)	!	%	
	745	6	26 Strongly agree
	738	7	25 Agree
	438	8	15 Undecided
(24)	552	9	19 Disagree
	407	11	11 Strongly disagree
	22	12	1 N. A.

(b) How hard was it for you to make this choice? (Check one)

	198	6	7 Very hard
	456	7	16 Fairly hard
(25)	851	8	29 Not so hard
	1360	9	47 Not hard at all
	37	12	1 N. A.

29. (a) Do you agree or disagree with the following statement?

"The best way to protect the United States against another war is to make her so strong militarily that no one would dare to attack her." (Check one)

	918	6	31 Strongly agree
	783	7	27 Agree
(26)	456	8	16 Undecided
	469	9	16 Disagree
	252	11	9 Strongly disagree
	24	12	1 N. A.

(b) How hard was it for you to make this choice? (Check one)

	231	6	8 Very hard
	432	7	15 Fairly hard
(27)	808	8	28 Not so hard
	1394	9	48 Not hard at all
	37	12	1 N. A.

30. (a) Do you agree or disagree with the following statement?

"It is necessary for the national safety of the United States to have a large Army." (Check one)

	648	6	22 Strongly agree
	946	7	33 Agree
(28)	469	8	16 Undecided
	593	9	21 Disagree
	215	11	7 Strongly disagree
	31	12	1 N. A.

(b) How hard was it for you to make this choice? (Check one)

	166	6	6 Very hard
	472	7	16 Fairly hard
(29)	987	8	34 Not so hard
	1231	9	42 Not hard at all
	46	12	2 N. A.

31. (a) With which of these statements concerning post-war relations with Russia do you come closest to agreeing? (Check only one)
- | (Col.) | # | % | |
|--------|------|----|---|
| | 203 | 6 | 7 "We shall be better off if we have just as little as possible to do with Russia." |
| | 462 | 7 | 16 "If Russia wants to keep on friendly terms with us, we shouldn't discourage her, but there is no reason why we should make any special effort to be friendly." |
| (30) | 1570 | 8 | 54 "It is important for the U. S. to be on friendly terms with Russia, but not so important that we should make too many concessions to her." |
| | 513 | 9 | 18 "It is very important to keep on friendly terms with Russia, and we should make every possible effort to do so." |
| | 93 | 11 | 3 Don't know. |
| | 61 | 12 | 2 N. A. |

(b) How strongly do you feel about this? (Check one)

- | | | | |
|------|------|----|-----------------------|
| | 52 | 6 | 2 Not at all strongly |
| | 131 | 7 | 5 Not so strongly |
| (31) | 884 | 8 | 30 Fairly strongly |
| | 1773 | 9 | 61 Very strongly |
| | 62 | 12 | 2 N. A. |

PART IV

HERE ARE SOME QUESTIONS ABOUT ARMY LIFE

32. (a) Do you think the Army is run about as well as possible? (Check one)

- | | | | |
|------|------|----|---|
| | 563 | 6 | 19 It is run about as well as possible, everything considered |
| (32) | 1008 | 7 | 35 It could be run somewhat better |
| | 1288 | 8 | 44 It could be run a lot better |
| | 43 | 12 | 2 N. A. |

(b) How strongly do you feel about this? (Check one)

- | | | | |
|------|------|----|-----------------------|
| | 44 | 6 | 2 Not at all strongly |
| | 100 | 7 | 3 Not so strongly |
| (33) | 735 | 8 | 25 Fairly strongly |
| | 1974 | 9 | 68 Very strongly |
| | 49 | 12 | 2 N. A. |

33. In general, do you feel you yourself have gotten a square deal from the Army? (Check one)

- | | | | |
|------|------|----|--|
| | 576 | 6 | 20 Yes, in most ways I have |
| (34) | 1600 | 7 | 55 In some ways, yes, in other ways, no |
| | 685 | 8 | 24 No, on the whole I haven't gotten a square deal |
| | 41 | 12 | 1 N. A. |

34. (a) Do you think discipline in the Army is too strict? (Check one)

(Col.)	#	%	
	495	6	17 It's too strict but most of it is necessary
	1535	7	53 It's too strict and a lot of it is unnecessary
(35)	695	8	24 It's about right
	128	9	4 It's not strict enough
	49	12	2 N. A.

(b) How strongly do you feel about this? (Check one)

	56	6	2 Not at all strongly
	158	7	5 Not so strongly
(36)	1000	8	35 Fairly strongly
	1637	9	56 Very strongly
	51	12	2 N. A.

35. (a) Do you agree or disagree with the following statement?

"Courts martial decisions are not always fair." (Check one)

	961	6	33 Strongly agree
	853	7	29 Agree
	723	8	25 Undecided
(37)	216	9	8 Disagree
	100	11	3 Strongly disagree
	49	12	2 N. A.

(b) How hard was it for you to answer this question? (Check one)

	195	6	7 Very hard
(38)	523	7	18 Fairly hard
	2096	8	72 Not hard
	88	12	3 N. A.

36. Here are four statements of opinion about the point system. Check the one which comes closest to your opinion.

	481	6	17 The point system itself was not a good idea, and the Army is carrying it out badly
	478	7	16 The point system itself was not a good idea, but the Army is carrying it out well
(39)	757	8	26 The point system itself was a good idea, but the Army is carrying it out badly
	700	9	24 The point system itself was a good idea, and the Army is carrying it out well
	423	11	15 I don't know enough about it to say
	63	12	2 N. A.

PART V

37. The Army is interested in finding out about the way soldiers feel about different things. Answer these questions carefully, even though some of them may sound strange to you. If you think a statement is true, place a check before the answer TRUE, like this: TRUE. If you think it is false, place a check before the answer FALSE, like this: FALSE.

(Col.)		1	2	3
(7)	1. The more a man is able and willing to work hard, the better chance he has of succeeding.	69 <u>1996</u> TRUE	30 <u>861</u> FALSE	1 <u>45</u> N.A.
(8)	2. My way of doing things is apt to be misunderstood by others.	64 <u>1871</u> TRUE	34 <u>979</u> FALSE	2 <u>52</u> N.A.
(9)	3. I find it hard to make talk when I meet new people.	35 <u>1012</u> TRUE	63 <u>1841</u> FALSE	2 <u>49</u> N.A.
(10)	4. After being caught in a mistake, it is hard to do good work for a while.	29 <u>839</u> TRUE	69 <u>2012</u> FALSE	2 <u>51</u> N.A.
(11)	5. My judgment is better than it ever was.	61 <u>1762</u> TRUE	36 <u>1049</u> FALSE	3 <u>91</u> N.A.
(12)	6. I wish I were not so shy.	37 <u>1071</u> TRUE	61 <u>1763</u> FALSE	2 <u>68</u> N.A.
(13)	7. I am a good mixer.	62 <u>1792</u> TRUE	35 <u>1009</u> FALSE	3 <u>101</u> N.A.
(14)	8. It is easy to express one's ideas.	53 <u>1548</u> TRUE	44 <u>1266</u> FALSE	3 <u>88</u> N.A.
(15)	9. I have met problems so full of possibilities that I have been unable to make up my mind about them.	67 <u>1950</u> TRUE	31 <u>885</u> FALSE	2 <u>67</u> N.A.
(16)	10. It takes a lot of argument to convince most people of the truth.	65 <u>1884</u> TRUE	33 <u>952</u> FALSE	2 <u>66</u> N.A.
(17)	11. I do not like everyone I know.	79 <u>2291</u> TRUE	19 <u>553</u> FALSE	2 <u>58</u> N.A.
(18)	12. It is difficult to say the right thing at the right time.	51 <u>1487</u> TRUE	47 <u>1347</u> FALSE	2 <u>68</u> N.A.
(19)	13. I think that I feel more intensely than most people do.	36 <u>1054</u> TRUE	60 <u>1739</u> FALSE	4 <u>109</u> N.A.
(20)	14. I dream frequently about things that are best kept to myself.	44 <u>1282</u> TRUE	53 <u>1545</u> FALSE	3 <u>75</u> N.A.
(21)	15. I do not read every editorial in the newspaper every day.	87 <u>2533</u> TRUE	11 <u>318</u> FALSE	2 <u>51</u> N.A.

		1	2	3
(22)	16. One can usually keep cool in important situations.	<u>67</u> 1949 TRUE	<u>31</u> 895 FALSE	<u>2</u> 58 N.A.
(23)	17. I am sure I am being talked about.	<u>27</u> 791 TRUE	<u>70</u> 2027 FALSE	<u>3</u> 84 N.A.
(24)	18. At times my thoughts have raced ahead faster than I could speak them.	<u>73</u> 2130 TRUE	<u>24</u> 690 FALSE	<u>3</u> 82 N.A.
(25)	19. At times I have a strong urge to do something harmful or shocking.	<u>36</u> 1061 TRUE	<u>61</u> 1765 FALSE	<u>3</u> 76 N.A.
(26)	20. It is easy to get one's own way in most situations.	<u>26</u> 752 TRUE	<u>71</u> 2067 FALSE	<u>3</u> 83 N.A.
(27)	21. I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.	<u>46</u> 1322 TRUE	<u>51</u> 1494 FALSE	<u>3</u> 86 N.A.
(28)	22. I work under a great deal of tension.	<u>31</u> 913 TRUE	<u>66</u> 1904 FALSE	<u>3</u> 85 N.A.
(29)	23. I seem to be about as capable and smart as most others around me.	<u>86</u> 2487 TRUE	<u>12</u> 339 FALSE	<u>2</u> 76 N.A.
(30)	24. It is easy to ignore criticism.	<u>39</u> 1125 TRUE	<u>58</u> 1693 FALSE	<u>3</u> 84 N.A.
(31)	25. I like to know some important people because it makes me feel important.	<u>30</u> 874 TRUE	<u>67</u> 1947 FALSE	<u>3</u> 81 N.A.
(32)	26. My conduct is largely controlled by the customs of those about me.	<u>53</u> 1531 TRUE	<u>44</u> 1294 FALSE	<u>3</u> 77 N.A.
(33)	27. At times I feel like smashing things.	<u>43</u> 1267 TRUE	<u>54</u> 1557 FALSE	<u>3</u> 78 N.A.
(34)	28. It is easy to act naturally in a group.	<u>79</u> 2291 TRUE	<u>18</u> 531 FALSE	<u>3</u> 80 N.A.
(35)	29. At times I feel that I can make up my mind with unusually great ease.	<u>79</u> 2301 TRUE	<u>18</u> 521 FALSE	<u>3</u> 80 N.A.
(36)	30. When I get bored I like to stir up some excitement.	<u>53</u> 1531 TRUE	<u>44</u> 1282 FALSE	<u>3</u> 89 N.A.
(37)	31. I do not always tell the truth.	<u>68</u> 1957 TRUE	<u>29</u> 847 FALSE	<u>3</u> 98 N.A.
(38)	32. It is hard to bring one's self to confide in others.	<u>53</u> 1557 TRUE	<u>43</u> 1238 FALSE	<u>4</u> 107 N.A.
(39)	33. I am sure I get a raw deal from life.	<u>17</u> 484 TRUE	<u>80</u> 2313 FALSE	<u>3</u> 105 N.A.

(Col.)		1	2	3
(40)	34. I usually feel that life is worth while.	90 <u>2605</u> TRUE	7 <u>219</u> FALSE	3 <u>78</u> N.A.
(41)	35. When in a group of people I have trouble thinking of the right things to talk about.	38 <u>1113</u> TRUE	58 <u>1691</u> FALSE	4 <u>98</u> N.A.
(42)	36. It is hard to do your best when people are watching you.	61 <u>1764</u> TRUE	36 <u>1049</u> FALSE	3 <u>89</u> N.A.
(43)	37. At times I feel like swearing.	85 <u>2473</u> TRUE	12 <u>339</u> FALSE	3 <u>90</u> N.A.
(44)	38. I brood a great deal.	26 <u>759</u> TRUE	70 <u>2018</u> FALSE	4 <u>125</u> N.A.
(45)	39. I have never felt better in my life than I do now.	28 <u>806</u> TRUE	69 <u>1998</u> FALSE	3 <u>98</u> N.A.
(46)	40. It is easy to get along with people.	81 <u>2358</u> TRUE	15 <u>444</u> FALSE	4 <u>100</u> N.A.
(47)	41. I find it hard to keep my mind on a task or job.	26 <u>754</u> TRUE	70 <u>2045</u> FALSE	4 <u>103</u> N.A.
(48)	42. I would rather win than lose in a game.	85 <u>2470</u> TRUE	12 <u>335</u> FALSE	3 <u>97</u> N.A.
(49)	43. I have periods in which I feel unusually cheerful without any special reason.	76 <u>2216</u> TRUE	20 <u>581</u> FALSE	4 <u>105</u> N.A.
(50)	44. It is easy to feel as though you had a world of self-confidence.	55 <u>1594</u> TRUE	41 <u>1190</u> FALSE	4 <u>118</u> N.A.
(51)	45. I sometimes keep on at a thing until others lose their patience with me.	51 <u>1477</u> TRUE	45 <u>1308</u> FALSE	4 <u>117</u> N.A.
(52)	46. I am an important person.	19 <u>558</u> TRUE	76 <u>2196</u> FALSE	5 <u>148</u> N.A.
(53)	47. What others think of me does not bother me.	51 <u>1485</u> TRUE	45 <u>1291</u> FALSE	4 <u>126</u> N.A.
(54)	48. So many people do things well that it is easy to become discouraged.	33 <u>953</u> TRUE	63 <u>1822</u> FALSE	4 <u>127</u> N.A.
(55)	49. Once in a while I laugh at a dirty joke.	89 <u>2594</u> TRUE	7 <u>201</u> FALSE	4 <u>107</u> N.A.
(56)	50. Sometimes without any reason or even when things are going wrong I feel excitedly happy, "on top of the world."	54 <u>1568</u> TRUE	42 <u>1219</u> FALSE	4 <u>115</u> N.A.

(Col.)		1	2	3
(57)	51. I have difficulty in starting to do things.	<u>34</u> 996 TRUE	<u>62</u> 1794 FALSE	<u>4</u> 112 N.A.
(58)	52. It is hard not to be self-conscious.	<u>56</u> 1618 TRUE	<u>39</u> 1145 FALSE	<u>5</u> 139 N.A.
(59)	53. Criticism or scolding hurts me terribly.	<u>43</u> 1253 TRUE	<u>52</u> 1513 FALSE	<u>5</u> 136 N.A.
(60)	54. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.	<u>62</u> 1784 TRUE	<u>34</u> 999 FALSE	<u>4</u> 119 N.A.
(61)	55. I am certainly lacking in self-confidence.	<u>25</u> 729 TRUE	<u>70</u> 2040 FALSE	<u>5</u> 133 N.A.
(62)	56. It is easy to keep people from taking advantage of you.	<u>50</u> 1453 TRUE	<u>46</u> 1333 FALSE	<u>4</u> 116 N.A.
(63)	57. Once in a while I put off until tomorrow what I ought to do today.	<u>81</u> 2360 TRUE	<u>15</u> 433 FALSE	<u>4</u> 109 N.A.
(64)	58. I am easily downed in an argument.	<u>20</u> 588 TRUE	<u>75</u> 2187 FALSE	<u>5</u> 127 N.A.
(65)	59. Once in a while I think of things too bad to talk about.	<u>56</u> 1628 TRUE	<u>40</u> 1153 FALSE	<u>4</u> 121 N.A.
(66)	60. It is easy to lose confidence in one's self.	<u>47</u> 1364 TRUE	<u>48</u> 1399 FALSE	<u>5</u> 139 N.A.
(67)	61. I do not mind being made fun of.	<u>48</u> 1379 TRUE	<u>48</u> 1407 FALSE	<u>4</u> 116 N.A.
(68)	62. I get angry sometimes.	<u>90</u> 2607 TRUE	<u>6</u> 183 FALSE	<u>4</u> 112 N.A.
(69)	63. I am liked by most people who know me.	<u>88</u> 2565 TRUE	<u>6</u> 178 FALSE	<u>6</u> 159 N.A.
(70)	64. I gossip a little at times.	<u>77</u> 2230 TRUE	<u>19</u> 548 FALSE	<u>4</u> 124 N.A.
(71)	65. If I could get into a movie without paying and be sure I was not seen I would probably do it.	<u>45</u> 1289 TRUE	<u>51</u> 1489 FALSE	<u>4</u> 124 N.A.
(72)	66. It would be better if almost all laws were thrown away.	<u>8</u> 238 TRUE	<u>88</u> 2550 FALSE	<u>4</u> 114 N.A.

PART VI

HERE ARE SOME QUESTIONS ABOUT THE KIND OF
WORK YOU EXPECT TO DO AFTER YOU LEAVE THE ARMY.

38. Regardless of whether you have definite plans or not, which one of these things do you think you will most probably do FIRST -- right after you leave the Army? (Check one -- if you plan to do more than one, check the one you expect to spend the most time at.)

(Col.)	#	%	
	1297	1	<u>46</u> I will probably work for an employer, for wages, salary or commission
	79	2	<u>3</u> I expect to work on a relative's farm (father's, uncle's, etc.)
(7)	126	3	<u>5</u> I expect to work in a relative's business (father's, uncle's, etc.)
	494	4	<u>13</u> I plan to go to full-time school or college
	687	5	<u>25</u> I plan to run my own business or farm
	51	6	<u>2</u> I plan to stay in the Army
	28	0	<u>1</u> N. A.

39. What type of employer do you expect to work for in your FIRST job after you leave the Army -- a company or person or branch of the government? (Check one)

	90	0	<u>3</u> N. A.
	536	1	<u>19</u> A company or person with fewer than fifty employees
	848	2	<u>31</u> A company or person with fifty or more employees
	182	3	<u>7</u> A branch of the Federal Government
	62	4	<u>2</u> A branch of a state government
	78	5	<u>3</u> A city, town or county government
	7	6	<u>*</u> Other employer. What? _____
(8)	188	7	<u>7</u> I have no idea what type of employer I'll work for
	704	8	<u>26</u> I'm not planning to work for an employer right after I leave the Army
	58	9	<u>2</u> "1" and "2" double-checked or private employer with number of employees not specified
	1	11	<u>*</u> "3", "4", "5" - double or triple-checked
	8	12	<u>*</u> Combination of "1" or "2" with "3" or "4"

40. Do you think you will try to get a government (Federal, State, City, etc.) job after you leave the Army? (Check one)

(9)	138	1	<u>5</u> I have a government job waiting for me, which I expect to take
	252	2	<u>9</u> I am definitely going to try to get a government job
	619	3	<u>22</u> I would like a government job, but I am not sure I will try to get one
	581	4	<u>21</u> I would try if I couldn't get some other job I would like
	1064	5	<u>39</u> I am not at all interested in a government job
	108	0	<u>4</u> N. A.

41. How do you feel about giving veterans who are not disabled a chance to get government jobs ahead of anyone else? (Check one)
- (Col.) # %
- 1 Veterans should get first chance at any government jobs they can do, even if some non-veterans could do the same work much better
- (10) 2 Veterans should get government jobs ahead of non-veterans only if they could do the work about as well
- 3 Veterans should be given government jobs only if they can do the work better than non-veterans who are trying for the same jobs

42. (a) Do you think the Government should give a job to every veteran who wants one and who can't get any other work? (Check one)

(11) 1821 1 66 Yes
 903 2 33 No
 38 0 1 N. A.

(b) How strongly do you feel about this? (Check one)

(12) 1811 1 66 Very strongly
 693 2 25 Fairly strongly
 219 3 8 Not strongly
 39 0 1 N. A.

43. A number of things have been suggested to help veterans get Government jobs after the war. Which of the following are you in FAVOR of and which ones are you AGAINST?

	I am in FAVOR of this	I am AGAINST this	N.A.
	<u>1</u>	<u>2</u>	<u>3</u>
(13) a. Veterans should have to pass examinations to get Government jobs . . .	71 <u>1952</u>	20 <u>549</u>	9 <u>261</u>
(14) b. Veterans should get ten extra points added on to their civil service examination grades	64 <u>1751</u>	26 <u>722</u>	10 <u>289</u>
(15) c. All Government jobs should be filled by veterans	24 <u>669</u>	65 <u>1796</u>	11 <u>297</u>
(16) d. Certain jobs in the Government (like messengers, guards, elevator operators) should be open to veterans ONLY	39 <u>1080</u>	49 <u>1363</u>	12 <u>319</u>
(17) e. Veterans should be treated the same as anyone else when it comes to getting Government jobs	30 <u>829</u>	58 <u>1608</u>	12 <u>325</u>
(18) f. If a veteran passes an examination, he should be considered for the job ahead of anyone else -- even if people who are not veterans get higher marks than he does	49 <u>1356</u>	44 <u>1134</u>	10 <u>272</u>

44. Where were you living most of the last five years of your civilian life before you came into the Army? (Check one)
- | (Col.) | # | % | |
|--------|-----|---|---|
| | 399 | 1 | 14 On a farm |
| | 152 | 2 | 6 In the country but not on a farm |
| (19) | 208 | 3 | 8 In a village with fewer than 2,500 people |
| | 571 | 4 | 21 In a small city with between 2,500 and 25,000 people |
| | 477 | 5 | 17 In a city with between 25,000 and 100,000 people |
| | 918 | 6 | 33 In a large city with more than 100,000 people |
| | 37 | 0 | 1 N. A. |

45. In what State of the United States did you spend most of the last five years of your civilian life before you came into the Army?

(20)

(21) Write the name of the State on the line above

46. Which of the following were you doing just before you came into the Army? (Check as many as you were doing just before you came into the Army.)

- | | | | |
|------|----|----|--|
| 1792 | 1 | 65 | Working full-time for an employer, for salary, wages or commission |
| 396 | 2 | 14 | Going to full-time school or college |
| 221 | 3 | 8 | Farming (either with your family or for yourself) |
| 136 | 4 | 5 | Had my own business (did <u>not</u> receive salary, wages or commission) |
| (22) | 12 | 5 | * Looking for a job |
| | 57 | 6 | 2 Working part-time for an employer |
| | 50 | 7 | 2 Going to part-time school or college |
| | 5 | 8 | * Something else. <u>What?</u> |

-
- | | | | |
|----|----|---|----------------------------|
| 14 | 9 | 1 | I was in the Regular Army |
| 53 | 0 | 2 | N. A. |
| 26 | 12 | 1 | Combination of "1" and "7" |

47. On the average how much money were you earning in your LAST job you had before coming into the Army? (Fill in one of the blanks below.)

Weekly pay \$ _____ per week

(23) or

Monthly pay \$ _____ per month

_____ I did not receive any regular pay.

WHAT WE WANT YOU TO DO

1. READ EVERY QUESTION OR STATEMENT CAREFULLY TO MAKE SURE YOU UNDERSTAND IT BEFORE MAKING YOUR ANSWER.
2. MARK SOME ANSWER TO EVERY QUESTION. IF YOU HAVE ANY MORE TO SAY, ADD IT, BUT FIRST MARK ONE OF THE SUGGESTED ANSWERS.
3. IF YOU HAVE ANY QUESTIONS, RAISE YOUR HAND.
4. CHECK AND MAKE SURE YOU HAVE ANSWERED EVERY QUESTION BEFORE YOU TURN IN YOUR PAPER.

BE SURE YOU DO NOT WRITE YOUR NAME OR SERIAL
NUMBER ANYWHERE ON THE QUESTIONNAIRE

HOW TO ANSWER THESE QUESTIONS

Most of these questions have several different answers printed right after the question. In front of each answer is a line, like this: . Read all of the answers under a question, then put a check-mark -- like this ✓ in front of the answer that you pick.

NOW BEGIN WITH QUESTION 1.

1. What is your Army rank or grade? (Put a check-mark on one line in front of your answer . . . like this: ✓)
- | | | | |
|--------|------|---|---|
| (Col.) | # | % | |
| | 640 | 1 | 22 Private |
| | 706 | 2 | 24 Private First Class |
| (7) | 1502 | 3 | 52 Noncom (Corporal or any grade of Sergeant or Technician) |
| | 15 | 4 | * Some other rank or grade (What rank or grade? <u> </u>) |
| | 45 | 0 | 2 N. A. |

2. How old were you on your last birthday? (Put a ✓ on one line to show how old you are.)

- | | | | | |
|-----|------|---|----|---------------------|
| (8) | 382 | 1 | 13 | 19 years or younger |
| | 1091 | 2 | 37 | 20 to 24 years |
| | 823 | 3 | 28 | 25 to 29 years |
| | 480 | 4 | 17 | 30 to 34 years |
| | 107 | 5 | 4 | 35 years or older |
| | 25 | 0 | 1 | N. A. |

3. How far did you go in school? (Check only one answer -- the highest grade of school you completed.)

- | | | | | | | | | |
|-----|-----|---|----|---------------------|------|---|----|-------------------------------------|
| (9) | 70 | 1 | 2 | Less than 6th grade | 742 | 5 | 26 | Some high school but did not finish |
| | 72 | 2 | 2 | Finished 6th grade | | | | |
| | 120 | 3 | 4 | Finished 7th grade | 1051 | 6 | 36 | Graduated from high school |
| | 295 | 4 | 10 | Finished 8th grade | 468 | 7 | 16 | Some college but did not finish |
| | 11 | 0 | 1 | N. A. | | | | |
| | | | | | 79 | 8 | 3 | Graduated from college |

4. (a) Have you served outside the Continental United States in this war? (Check one)

- | | | | |
|------|---|----|-----------------------------------|
| 1690 | 1 | 58 | No |
| 8 | 5 | * | Yes, with nothing checked in (b). |

- (10) (b) If YES, have you been in actual combat in this war? (Check one)

- | | | | |
|-----|---|----|---|
| 370 | 2 | 13 | No |
| 224 | 3 | 8 | Yes, I have been under enemy fire, but not in actual combat |
| 597 | 4 | 20 | Yes, I have been in actual combat |
| 19 | 0 | 1 | N. A. |

5. How long have you been in the Army? (Check one)

(Col.)	#	<u>3</u>			
	171	1	<u>6</u>	6 months or less	NOTE: If you have been in the Army before, then were out for awhile, just check the length of time since you entered <u>this last time</u> . If you were in the <u>National Guard</u> , check the length of time since your outfit came into the Army.
	332	2	<u>11</u>	Over 6 months up to 1 year	
	610	3	<u>21</u>	Over 1 year up to 2 years	
(11)	941	4	<u>32</u>	Over 2 years up to 3 years	
	669	5	<u>23</u>	Over 3 years up to 4 years	
	172	6	<u>6</u>	Over 4 years	
	13	0	<u>1</u>	N. A.	

6. In what branch of the Army did you serve for the longest period of time? (Check one)

	184	1-	<u>6</u>	Engineers	965	9-	<u>33</u>	Air Corps
	155	2-	<u>5</u>	Field Artillery	22	11-	<u>1</u>	Transportation Corps
	83	3-	<u>3</u>	Quartermaster Corps	75	-1	<u>3</u>	Ordnance Department
(12)	531	4-	<u>18</u>	Infantry	64	-2	<u>2</u>	Chemical Warfare Service
(13)	148	5-	<u>5</u>	Medical Department	127	-3	<u>4</u>	Military Police
	132	6-	<u>5</u>	Armored Force & Tank Destroyer	83	-4	<u>3</u>	DEML (Station Complement)
	127	7-	<u>4</u>	Signal Corps	74	-5	<u>3</u>	Other (Which one? _____)
	118	8-	<u>4</u>	Coast Artillery & Anti-Aircraft	20	0	<u>1</u>	N. A.

7. In which of the Army Forces did you serve for the longest period of time? (Check one)

(14)	986	1	<u>34</u>	Army Air Forces
	1165	2	<u>40</u>	Army Ground Forces
	691	3	<u>24</u>	Army Service Forces
	66	0	<u>2</u>	N. A.

8. Are you: (Check one)

(15)	1484	1	<u>51</u>	Single
	1359	2	<u>47</u>	Married
	40	3	<u>1</u>	Divorced or separated
	4	4	<u>*</u>	Widowed
	21	0	<u>1</u>	N.A.

9. How many points toward discharge do you have officially?

_____ points

(16) _____ I don't know what my point score is

(17) 0 N.A.

Table A

Q. 9. How many points toward discharge do you have officially?

<u>#</u>	<u>Code</u>	<u>%</u>	
<u>131</u>	01-09	<u>5</u>	1-9 points
<u>156</u>	10-19	<u>5</u>	10-19 points
<u>340</u>	20-29	<u>12</u>	20-29 points
<u>661</u>	30-39	<u>23</u>	30-39 points
<u>623</u>	40-49	<u>21</u>	40-49 points
<u>422</u>	50-59	<u>15</u>	50-59 points
<u>211</u>	60-69	<u>7</u>	60-69 points
<u>52</u>	70-79	<u>2</u>	70-79 points
<u>39</u>	80-89	<u>1</u>	80-89 points
<u>12</u>	90-99	<u>*</u>	90-99 points
<u>4</u>	X0-X9	<u>*</u>	100-109 points
<u>11</u>	Y0-Y9	<u>*</u>	110-119 points
<u>-</u>	Y X	<u>-</u>	120 points and over
<u>166</u>	Y Y	<u>6</u>	Don't know
<u>80</u>	0 0	<u>3</u>	N. A.

PART I

10. Here are some statements made about officers and their jobs. You will find that you agree with some and disagree with others.

If you agree with the statement, draw a circle around the word "AGREE" which comes after the statement -- like this, AGREE. If you disagree, draw a circle around the word "DISAGREE" -- like this, DISAGREE. If you are in doubt or just can't make up your mind, draw a circle around the question-mark "?" -- like this, ?.

There are no right or wrong answers. We want your own opinion -- what you personally agree or disagree with.

(Col.)		1	2	3	4
a.	"An officer has to be very strict with his men or else they will take advantage of him." . . .	29 AGREE 833	3 ? 92	67 DISAGREE 1959	1 N.A. 24
b.	"An officer who is friendly with the enlisted men loses some of his authority over them." . . .	15 AGREE 446	3 ? 73	81 DISAGREE 2363	1 N.A. 26
c.	"An officer who really does his job, cannot expect to be popular with the men."	12 AGREE 333	3 ? 93	84 DISAGREE 2449	1 N.A. 33
d.	"An officer should teach his men to obey all rules and regulations without questioning them."	52 AGREE 1517	6 ? 184	40 DISAGREE 1161	2 N.A. 46
e.	"An officer will lose the respect of his men if he pals around with them off-duty." . . .	19 AGREE 555	6 ? 176	73 DISAGREE 2134	2 N.A. 43
f.	"Whenever he can, the officer should let the men decide among themselves as to the best way to do a job."	82 AGREE 2368	3 ? 94	14 DISAGREE 408	1 N.A. 34

11. (a) Considering their responsibilities, how do you feel about the privileges that officers get compared with those which enlisted men get? (Check one)

	#	%	
	1552	1	54 Officers have <u>far too many</u> privileges
	865	2	30 Officers have <u>a few too many</u> privileges
(24)	417	3	14 Officers have <u>about the right number</u> of privileges
	36	4	1 Officers have <u>too few</u> privileges
	38	0	1 N. A.

- (b) How strongly do you feel about this? (Check one)

	174	1	6 Not strongly at all
	291	2	10 Not so strongly
(25)	904	3	31 Fairly strongly
	1499	4	52 Very strongly
	40	0	1 N. A.

PART II

THE FOLLOWING QUESTIONS ARE ABOUT ARMY LIFE

12. (a) On the whole, how is your morale? (Check one)

(Col.)	#	%	
	174	1	6 Very high
	547	2	19 Fairly high
(26)	893	3	31 Just so-so
	477	4	15 Fairly low
	798	5	27 Very low
	19	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	108	1	4 Not at all strongly
	286	2	10 Not so strongly
(27)	1042	3	36 Fairly strongly
	1424	4	49 Very strongly
	18	0	1 N. A.

13. (a) All things considered, do you think the Army is run about as well as possible, or do you think it could be run better? (Check one)

	454	1	16 It is run about as well as possible, everything considered
(28)	1153	2	40 It could be run somewhat better
	1291	3	44 It could be run a lot better
	10	0	* N. A.

(b) How strongly do you feel about this? (Check one)

	65	1	2 Not at all strongly
	160	2	6 Not so strongly
(29)	854	3	29 Fairly strongly
	1805	4	62 Very strongly
	24	0	1 N. A.

14. (a) In general, do you think the Army has tried its best to see that men get as square a deal as possible? (Check one)

	482	1	17 Yes, it has tried its best
(30)	1915	2	66 It has tried some but not hard enough
	497	3	17 It has hardly tried at all
	14	0	* N. A.

(b) How strongly do you feel about this? (Check one)

	62	1	2 Not at all strongly
	190	2	7 Not so strongly
(31)	904	3	31 Fairly strongly
	1726	4	59 Very strongly
	26	0	1 N. A.

15. (a) In general, do you feel you yourself have gotten a square deal from the Army? (Check one)

(Col.) # %

	729	1	25	Yes, in most ways I have
	1609	2	55	In some ways, yes, in other ways, no
(32)	550	3	19	No, on the whole I haven't gotten a square deal
	20	0	1	N. A.

(b) How strongly do you feel about this? (Check one)

	62	1	2	Not at all strongly
	167	2	6	Not so strongly
(33)	971	3	33	Fairly strongly
	1674	4	58	Very strongly
	34	0	1	N. A.

16. (a) Do you feel that the Army has tried its best to look out for the welfare of the enlisted men? (Check one)

	604	1	21	Yes, it has tried its best
(34)	1912	2	65	It has tried some, but not hard enough
	371	3	13	It has hardly tried at all
	21	0	1	N. A.

(b) How strongly do you feel about this? (Check one)

	54	1	2	Not at all strongly
	214	2	7	Not so strongly
(35)	1068	3	37	Fairly strongly
	1541	4	53	Very strongly
	31	0	1	N. A.

17. (a) In general, how interested do you think the Army has been in your own welfare? (Check one)

	204	1	7	Very much
	915	2	31	Pretty much
(36)	1208	3	42	Not so much
	546	4	19	Not at all
	35	0	1	N. A.

(b) How strongly do you feel about this? (Check one)

	60	1	2	Not at all strongly
	242	2	9	Not so strongly
(37)	1113	3	38	Fairly strongly
	1449	4	50	Very strongly
	44	0	1	N. A.

18. (a) On the whole, do you think the Army gives a man a chance to show what he can do? (Check one)

(Col.)	#		%	
	128	1	4	A very good chance
	671	2	23	A fairly good chance
	1476	3	51	Not much of a chance
(38)	513	4	18	No chance at all
	98	5	3	Undecided
	22	0	1	N. A.

(b) How strongly do you feel about this? (Check one)

	60	1	2	Not at all strongly
	179	2	6	Not so strongly
(39)	891	3	31	Fairly strongly
	1733	4	59	Very strongly
	45	0	2	N. A.

19. (a) In general, how well do you think the Army is run? (Check one)

	175	1	6	It is run very well
	1181	2	40	It is run pretty well
(40)	871	3	30	It is not run so well
	515	4	18	It is run very poorly
	140	5	5	Undecided
	26	0	1	N. A.

(b) How strongly do you feel about this? (Check one)

	75	1	3	Not at all strongly
	246	2	8	Not so strongly
(41)	1142	3	39	Fairly strongly
	1393	4	48	Very strongly
	52	0	2	N. A.

20. (a) What do you think of discipline in the Army? (Check one)

	435	1	15	It's too strict but most of it is necessary
	1774	2	61	It's too strict and a lot of it is unnecessary
(42)	559	3	19	It's about right
	108	4	4	It's not strict enough
	32	0	1	N. A.

(b) How strongly do you feel about this? (Check one)

	53	1	2	Not at all strongly
	186	2	6	Not so strongly
(43)	861	3	30	Fairly strongly
	1762	4	60	Very strongly
	46	0	2	N. A.

21. Do you think the Army pays too much attention, too little, or about the right amount of attention to inspections and "spit and polish"? (Check one)

	1849	1	64	Too much attention
(44)	898	2	31	About the right amount
	122	3	4	Too little attention
	39	0	1	N. A.

22. Do you think the Army pays too much attention, too little, or about the right amount of attention to military courtesies? (Check one)

(Col.)	#	%	
	1553	1	54 Too much attention
	1173	2	40 About the right amount
(45)	156	3	5 Too little attention
	26	0	1 N. A.

23. (a) Did your officers use their rank in ways that seemed unnecessary to you? (Check one)

	292	1	10 Yes, always
	1045	2	36 Yes, usually
(46)	335	3	12 Undecided
	993	4	34 No, not very often
	218	5	7 No, almost never
	25	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	141	1	5 Not at all strongly
	318	2	11 Not so strongly
(47)	950	3	33 Fairly strongly
	1427	4	49 Very strongly
	72	0	2 N. A.

24. Since you have been in the Army, have you ever been punished for breaking rules or regulations? (Check one)

	1678	1	58 No, never
	1028	2	35 Yes, once or twice
(48)	146	3	5 Yes, several times
	41	4	1 Yes, quite a few times
	15	0	1 N. A.

25. (a) Do you think when you are discharged you will go back to civilian life with a favorable or unfavorable attitude toward the Army? (Check one)

	279	1	10 Very favorable
	526	2	18 Fairly favorable
(49)	1022	3	35 About 50-50
	464	4	16 Fairly unfavorable
	595	5	20 Very unfavorable
	22	0	1 N. A.

(b) How strongly do you feel about this? (Check one)

	69	1	3 Not at all strongly
	186	2	6 Not so strongly
(50)	930	3	32 Fairly strongly
	1695	4	58 Very strongly
	20	0	1 N. A.

26. (a) The Army has set up an Inspector-General system (the I.G. or Air Inspector) to handle complaints from enlisted men.

(Col.) How well do you think this system actually works? (Check one)

	#	%	
	317	1	11 Very well
	795	2	27 Fairly well
	714	3	25 Not so well
(51)	498	4	17 Not at all well
	509	5	18 Undecided
	45	0	2 N. A.

(b) How strongly do you feel about this? (Check one)

	194	1	7 Not at all strongly
	292	2	10 Not so strongly
(52)	887	3	31 Fairly strongly
	1377	4	47 Very strongly
	158	0	5 N. A.

27. Have you ever taken a problem or complaint to the Inspector-General (the I.G. or Air Inspector)? (Check one)

	574	1	20 Yes
(53)	2304	2	79 No
	30	0	1 N. A.

28. Have you ever felt like taking a problem or complaint to the Inspector-General (the I.G. or Air Inspector), but then decided not to do so? (Check one)

	1680	1	58 No
(54)	1158	2	40 Yes (Why did you decide not to? _____)
	70	0	2 N. A.

29. In general, what do you think of the Army Score Card Plan (the point system)? (Check one)

	392	1	14 It is <u>very good</u>
(55)	1169	2	40 It is <u>fairly good</u>
	704	3	24 It is <u>not so good</u>
	486	4	17 It is <u>not good at all</u>

	120	5	4 I don't know enough about it to say
	37	0	1 N. A.

30. (a) In your opinion, is the Army Score Card Plan (the point system) being carried out the way it was supposed to be? (Check one)
- | | | | |
|--------|------|---|--|
| (Col.) | # | % | |
| | 1634 | 1 | <u>56</u> Yes, <u>I think it is</u> being carried out the way it was supposed to be |
| (56) | 945 | 2 | <u>33</u> No, <u>I don't think it is</u> being carried out the way it was supposed to be |
| | 275 | 3 | <u>9</u> I don't know enough about the plan to say |
| | 54 | 0 | <u>2</u> N. A. |

(b) How strongly do you feel about this? (Check one)

- | | | | |
|------|------|---|---------------------------|
| (57) | 1283 | 1 | <u>44</u> Very strongly |
| | 1160 | 2 | <u>40</u> Fairly strongly |
| | 327 | 3 | <u>11</u> Not strongly |
| | 138 | 0 | <u>5</u> N. A. |

31. Here are four statements of opinion about the point system. Check the one which comes closest to your opinion.

- | | | | |
|------|-----|---|--|
| (58) | 904 | 1 | <u>31</u> The point system itself was a good idea, and the Army is carrying it out well |
| | 823 | 2 | <u>28</u> The point system itself was a good idea, but the Army is carrying it out badly |
| | 613 | 3 | <u>21</u> The point system itself was not a good idea, but the Army is carrying it out well |
| | 278 | 4 | <u>10</u> The point system itself was not a good idea, and the Army is carrying it out badly |
| | 220 | 5 | <u>8</u> I don't know enough about it to say |
| | 70 | 0 | <u>2</u> N. A. |

32. In your opinion, how hard is the Army trying to speed up the discharge of enlisted men? (Check one)

- | | | | |
|------|------|---|--|
| (59) | 834 | 1 | <u>29</u> The Army is trying its best |
| | 1686 | 2 | <u>58</u> The Army is trying some, but not hard enough |
| | 353 | 3 | <u>12</u> The Army is hardly trying at all |
| | 35 | 0 | <u>1</u> N. A. |

33. If you have any comments about the Army's discharge plans, please write them here.

PART III

HERE ARE SOME STATEMENTS ABOUT ARMY RULES AND REGULATIONS AND THEIR ENFORCEMENT. FOR EACH STATEMENT, CHECK THE ANSWER THAT BEST SHOWS HOW CLOSELY YOU AGREE WITH IT.

34. (a) Do you agree or disagree with this statement?

(Col.) "A person should obey only those Army rules and regulations which seem reasonable." (Check one)

	#	%	
	376	6	13 Strongly agree
	818	7	29 Agree
(18)	305	8	10 Undecided
	1067	9	37 Disagree
	304	11	10 Strongly disagree
	38	12	1 N. A.

(b) How hard was it for you to answer this question? (Check one)

	266	6	9 Very hard
	509	7	18 Fairly hard
(19)	796	8	27 Not so hard
	1292	9	44 Not hard at all
	45	12	2 N. A.

35. (a) Do you agree or disagree with this statement?

"It is all right to get around Army rules and regulations, if you don't actually break them." (Check one)

	421	6	14 Strongly agree
	1293	7	45 Agree
(20)	447	8	15 Undecided
	570	9	20 Disagree
	127	11	4 Strongly disagree
	50	12	2 N. A.

(b) How hard was it for you to answer this question? (Check one)

	192	6	7 Very hard
	486	7	17 Fairly hard
(21)	943	8	32 Not so hard
	1219	9	42 Not hard at all
	68	12	2 N. A.

36. (a) Do you agree or disagree with this statement?

(Col.) "Courts martial decisions are always fair." (Check one)

	#	%	
	69	6	2 Strongly agree
	289	7	10 Agree
	668	8	23 Undecided
(22)	1070	9	37 Disagree
	760	11	26 Strongly disagree
	52	12	2 N. A.

(b) How hard was it for you to answer this question? (Check one)

	152	6	5 Very hard
	271	7	9 Fairly hard
(23)	754	8	26 Not so hard
	1646	9	57 Not hard at all
	85	12	3 N. A.

37. (a) Do you agree or disagree with this statement?

"It is all right for a person to break Army rules if he doesn't get caught."
(Check one)

	175	6	6 Strongly agree
	435	7	15 Agree
	292	8	10 Undecided
(24)	1448	9	50 Disagree
	517	11	18 Strongly disagree
	41	12	1 N. A.

(b) How hard was it for you to answer this question? (Check one)

	118	6	6 Very hard
	227	7	8 Fairly hard
	830	8	28 Not so hard
(25)	1679	9	58 Not hard at all
	54	12	2 N. A.

38. (a) Do you agree or disagree with this statement?

"In courts martial, an enlisted man will receive as fair treatment as an officer." (Check one)

	175	6	6 Strongly agree
	514	7	18 Agree
(26)	649	8	22 Undecided
	834	9	29 Disagree
	686	11	23 Strongly disagree
	50	12	2 N. A.

(b) How hard was it for you to answer this question? (Check one)

	164	6	6 Very hard
	279	7	9 Fairly hard
(27)	725	8	25 Not so hard
	1656	9	57 Not hard at all
	84	12	3 N. A.

39. (a) Do you agree or disagree with this statement?

(Col.) "A person who reports small violations of Army regulations is only a trouble-maker." (Check one)

	#	%	
	881	6	30 Strongly agree
	1185	7	41 Agree
(28)	342	8	12 Undecided
	374	9	13 Disagree
	89	11	3 Strongly disagree
	37	12	1 N. A.

(b) How hard was it for you to answer this question? (Check one)

	119	6	4 Very hard
	248	7	9 Fairly hard
(29)	768	8	26 Not so hard
	1720	9	59 Not hard at all
	53	12	2 N. A.

40. (a) Do you agree or disagree with this statement?

"It is difficult to break Army rules and keep your self-respect." (Check one)

	295	6	10 Strongly agree
	912	7	31 Agree
(30)	462	8	16 Undecided
	856	9	30 Disagree
	334	11	11 Strongly disagree
	49	12	2 N. A.

(b) How hard was it for you to answer this question? (Check one)

	117	6	4 Very hard
	336	7	12 Fairly hard
(31)	912	8	31 Not so hard
	1461	9	50 Not hard at all
	82	12	3 N. A.

41. (a) Do you agree or disagree with this statement?

"Soldiers who break Army rules and regulations are nearly always caught and punished." (Check one)

	266	6	9 Strongly agree
	1046	7	36 Agree
(32)	240	8	8 Undecided
	943	9	32 Disagree
	369	11	13 Strongly disagree
	44	12	2 N. A.

(b) How hard was it for you to answer this question? (Check one)

	60	6	2 Very hard
(33)	211	7	7 Fairly hard
	967	8	33 Not so hard
	1612	9	56 Not hard at all
	58	12	2 N. A.

PART IV

THE FOLLOWING STATEMENTS HAVE BEEN MADE ABOUT THE RELATIONS OF THE UNITED STATES WITH RUSSIA. DO YOU AGREE OR DISAGREE WITH THEM?

42. (a) Do you agree or disagree with this statement?

(Col.) "It is very important to keep on friendly terms with Russia, and we should make every possible effort to do so."

	#	%	
	2043	6	70 Agree
	454	7	16 Disagree
(34)	358	8	12 Undecided
	53	12	2 N. A.

(b) How strongly do you feel about this? (Check one)

	92	6	3 Not at all strongly
	172	7	6 Not so strongly
(35)	770	8	26 Fairly strongly
	1764	9	61 Very strongly
	110	12	4 N. A.

43. (a) Do you agree or disagree with this statement?

"It is important for the U.S. to be on friendly terms with Russia, but not so important that we should make too many concessions to her."

	2438	6	84 Agree
(36)	165	7	5 Disagree
	251	8	9 Undecided
	54	12	2 N. A.

(b) How strongly do you feel about this? (Check one)

	63	6	2 Not at all strongly
	116	7	4 Not so strongly
(37)	728	8	25 Fairly strongly
	1898	9	65 Very strongly
	103	12	4 N. A.

44. (a) Do you agree or disagree with this statement?

"If Russia wants to keep on friendly terms with us, we shouldn't discourage her, but there is no reason why we should make any special effort to be friendly."

	1243	6	43 Agree
(38)	1320	7	45 Disagree
	286	8	10 Undecided
	59	12	2 N. A.

(b) How strongly do you feel about this? (Check one)

	63	6	2 Not at all strongly
	144	7	5 Not so strongly
(39)	1012	8	35 Fairly strongly
	1575	9	54 Very strongly
	114	12	4 N. A.

45. (a) Do you agree or disagree with this statement?

(Col.) "We shall be better off if we have just as little as possible to do with Russia."

	#	%	
	578	6	20 Agree
	1903	7	65 Disagree
(40)	366	8	13 Undecided
	61	12	2 N. A.

(b) How strongly do you feel about this? (Check one)

	72	6	2 Not at all strongly
	153	7	5 Not so strongly
(41)	912	8	32 Fairly strongly
	1637	9	56 Very strongly
	134	12	5 N. A.

46. (a) With which one of these statements concerning post-war relations with Russia do you come closest to agreeing? (check only one)

	580	6	20 "It is very important to keep on friendly terms with Russia, and we should make every possible effort to do so."
(42)	1533	7	53 "It is important for the U.S. to be on friendly terms with Russia, but not so important that we should make too many concessions to her."
	437	8	15 "If Russia wants to keep on friendly terms with us, we shouldn't discourage her, but there is no reason why we should make any special effort to be friendly."
	154	9	5 "We shall be better off if we have just as little as possible to do with Russia."
	107	11	4 Don't know
	97	12	3 N. A.

(b) How strongly do you feel about this? (Check one)

	35	6	1 Not at all strongly
	105	7	4 Not so strongly
(43)	874	8	30 Fairly strongly
	1773	9	61 Very strongly
	121	12	4 N. A.

PART V

47. The Army is interested in finding out about the way soldiers feel about different things. Answer these questions carefully, even though some of them may sound strange to you. If you think a statement is true, place a check before the answer TRUE, like this: TRUE. If you think it is false, place a check before the answer FALSE, like this FALSE.

CARD III
(Col.)

		1	2	3
(7)	1. The more a man is able and willing to work hard, the better chance he has of succeeding.	73 <u>2116</u> TRUE	25 <u>730</u> FALSE	2 <u>62</u> N.A.
(8)	2. My way of doing things is apt to be misunderstood by others.	63 <u>1829</u> TRUE	35 <u>1016</u> FALSE	2 <u>63</u> N.A.
(9)	3. I find it hard to make talk when I meet new people.	35 <u>1008</u> TRUE	63 <u>1831</u> FALSE	2 <u>69</u> N.A.
(10)	4. After being caught in a mistake, it is hard to do good work for a while.	29 <u>828</u> TRUE	69 <u>2016</u> FALSE	2 <u>64</u> N.A.
(11)	5. My judgment is better than it ever was.	61 <u>1777</u> TRUE	34 <u>1001</u> FALSE	5 <u>130</u> N.A.
(12)	6. I wish I were not so shy.	37 <u>1064</u> TRUE	60 <u>1741</u> FALSE	3 <u>103</u> N.A.
(13)	7. I am a good mixer.	61 <u>1767</u> TRUE	34 <u>1005</u> FALSE	5 <u>136</u> N.A.
(14)	8. It is easy to express one's ideas.	54 <u>1562</u> TRUE	42 <u>1235</u> FALSE	4 <u>111</u> N.A.
(15)	9. I have met problems so full of possibilities that I have been unable to make up my mind about them.	66 <u>1915</u> TRUE	31 <u>899</u> FALSE	3 <u>94</u> N.A.
(16)	10. It takes a lot of argument to convince most people of the truth.	59 <u>1721</u> TRUE	37 <u>1078</u> FALSE	4 <u>109</u> N.A.
(17)	11. I do not like everyone I know.	76 <u>2225</u> TRUE	21 <u>597</u> FALSE	3 <u>86</u> N.A.
(18)	12. It is difficult to say the right thing at the right time.	47 <u>1361</u> TRUE	49 <u>1441</u> FALSE	4 <u>106</u> N.A.
(19)	13. I think that I feel more intensely than most people do.	36 <u>1049</u> TRUE	58 <u>1695</u> FALSE	6 <u>164</u> N.A.
(20)	14. I dream frequently about things that are best kept to myself.	42 <u>1210</u> TRUE	54 <u>1575</u> FALSE	4 <u>123</u> N.A.
(21)	15. I do not read every editorial in the newspaper every day.	85 <u>2479</u> TRUE	12 <u>343</u> FALSE	3 <u>86</u> N.A.

(Col.)		1	2	3
(22)	16. One can usually keep cool in important situations.	<u>67</u> 1938 TRUE	<u>29</u> 859 FALSE	<u>4</u> 111 N.A.
(23)	17. I am sure I am being talked about.	<u>25</u> 736 TRUE	<u>70</u> 2036 FALSE	<u>5</u> 136 N.A.
(24)	18. At times my thoughts have raced ahead faster than I could speak them.	<u>75</u> 2173 TRUE	<u>21</u> 624 FALSE	<u>4</u> 111 N.A.
(25)	19. At times I have a strong urge to do something harmful or shocking.	<u>36</u> 1041 TRUE	<u>60</u> 1752 FALSE	<u>4</u> 115 N.A.
(26)	20. It is easy to get one's own way in most situations.	<u>25</u> 718 TRUE	<u>70</u> 2050 FALSE	<u>5</u> 140 N.A.
(27)	21. I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.	<u>46</u> 1324 TRUE	<u>50</u> 1458 FALSE	<u>4</u> 126 N.A.
(28)	22. I work under a great deal of tension.	<u>33</u> 953 TRUE	<u>63</u> 1826 FALSE	<u>4</u> 129 N.A.
(29)	23. I seem to be about as capable and smart as most others around me.	<u>84</u> 2433 TRUE	<u>12</u> 351 FALSE	<u>4</u> 124 N.A.
(30)	24. It is easy to ignore criticism.	<u>38</u> 1112 TRUE	<u>57</u> 1667 FALSE	<u>5</u> 129 N.A.
(31)	25. I like to know some important people because it makes me feel important.	<u>30</u> 870 TRUE	<u>66</u> 1909 FALSE	<u>4</u> 129 N.A.
(32)	26. My conduct is largely controlled by the customs of those about me.	<u>50</u> 1443 TRUE	<u>46</u> 1343 FALSE	<u>4</u> 122 N.A.
(33)	27. At times I feel like smashing things.	<u>44</u> 1262 TRUE	<u>52</u> 1518 FALSE	<u>4</u> 128 N.A.
(34)	28. It is easy to act naturally in a group.	<u>77</u> 2235 TRUE	<u>18</u> 532 FALSE	<u>5</u> 141 N.A.
(35)	29. At times I feel that I can make up my mind with unusually great ease.	<u>78</u> 2273 TRUE	<u>17</u> 499 FALSE	<u>5</u> 136 N.A.
(36)	30. When I get bored I like to stir up some excitement.	<u>52</u> 1513 TRUE	<u>43</u> 1260 FALSE	<u>5</u> 135 N.A.
(37)	31. I do not always tell the truth.	<u>66</u> 1929 TRUE	<u>29</u> 846 FALSE	<u>5</u> 133 N.A.
(38)	32. It is hard to bring one's self to confide in others.	<u>51</u> 1488 TRUE	<u>43</u> 1251 FALSE	<u>6</u> 169 N.A.

(Col.)		1	2	3
(39)	33. I am sure I get a raw deal from life.	<u>16</u> 468 TRUE	<u>79</u> 2287 FALSE	<u>5</u> 153 N.A.
(40)	34. I usually feel that life is worth while.	<u>88</u> 2556 TRUE	<u>8</u> 225 FALSE	<u>4</u> 127 N.A.
(41)	35. When in a group of people I have trouble thinking of the right things to talk about.	<u>38</u> 1102 TRUE	<u>58</u> 1688 FALSE	<u>4</u> 118 N.A.
(42)	36. It is hard to do your best when people are watching you.	<u>59</u> 1724 TRUE	<u>37</u> 1070 FALSE	<u>4</u> 114 N.A.
(43)	37. At times I feel like swearing.	<u>83</u> 2399 TRUE	<u>13</u> 386 FALSE	<u>4</u> 123 N.A.
(44)	38. I brood a great deal.	<u>27</u> 776 TRUE	<u>68</u> 1975 FALSE	<u>5</u> 157 N.A.
(45)	39. I have never felt better in my life than I do now.	<u>24</u> 695 TRUE	<u>72</u> 2084 FALSE	<u>4</u> 129 N.A.
(46)	40. It is easy to get along with people.	<u>80</u> 2319 TRUE	<u>16</u> 454 FALSE	<u>4</u> 135 N.A.
(47)	41. I find it hard to keep my mind on a task or job.	<u>28</u> 810 TRUE	<u>68</u> 1976 FALSE	<u>4</u> 122 N.A.
(48)	42. I would rather win than lose in a game.	<u>82</u> 2384 TRUE	<u>13</u> 372 FALSE	<u>5</u> 152 N.A.
(49)	43. I have periods in which I feel unusually cheerful without any special reason.	<u>74</u> 2159 TRUE	<u>21</u> 609 FALSE	<u>5</u> 140 N.A.
(50)	44. It is easy to feel as though you had a world of self-confidence.	<u>50</u> 1464 TRUE	<u>44</u> 1268 FALSE	<u>6</u> 176 N.A.
(51)	45. I sometimes keep on at a thing until others lose their patience with me.	<u>52</u> 1497 TRUE	<u>43</u> 1256 FALSE	<u>5</u> 155 N.A.
(52)	46. I am an important person.	<u>20</u> 578 TRUE	<u>74</u> 2138 FALSE	<u>6</u> 192 N.A.
(53)	47. What others think of me does not bother me.	<u>49</u> 1415 TRUE	<u>46</u> 1336 FALSE	<u>5</u> 157 N.A.
(54)	48. So many people do things well that it is easy to become discouraged.	<u>34</u> 981 TRUE	<u>61</u> 1772 FALSE	<u>5</u> 155 N.A.
(55)	49. Once in a while I laugh at a dirty joke.	<u>88</u> 2550 TRUE	<u>7</u> 211 FALSE	<u>5</u> 147 N.A.

(Col.)		1	2	3
(56)	50. Sometimes without any reason or even when things are going wrong I feel excitedly happy, "on top of the world."	<u>55</u> 1601 TRUE	<u>40</u> 1151 FALSE	<u>5</u> 156 N.A.
(57)	51. I have difficulty in starting to do things.	<u>35</u> 1012 TRUE	<u>60</u> 1743 FALSE	<u>5</u> 153 N.A.
(58)	52. It is hard not to be self-conscious.	<u>57</u> 1671 TRUE	<u>37</u> 1067 FALSE	<u>6</u> 170 N.A.
(59)	53. Criticism or scolding hurts me terribly.	<u>42</u> 1210 TRUE	<u>52</u> 1521 FALSE	<u>6</u> 177 N.A.
(60)	54. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.	<u>61</u> 1782 TRUE	<u>33</u> 964 FALSE	<u>6</u> 162 N.A.
(61)	55. I am certainly lacking in self-confidence.	<u>24</u> 683 TRUE	<u>71</u> 2072 FALSE	<u>5</u> 153 N.A.
(62)	56. It is easy to keep people from taking advantage of you.	<u>50</u> 1454 TRUE	<u>45</u> 1311 FALSE	<u>5</u> 143 N.A.
(63)	57. Once in a while I put off until tomorrow what I ought to do today.	<u>83</u> 2399 TRUE	<u>13</u> 385 FALSE	<u>4</u> 124 N.A.
(64)	58. I am easily downed in an argument.	<u>18</u> 524 TRUE	<u>77</u> 2233 FALSE	<u>5</u> 151 N.A.
(65)	59. Once in a while I think of things too bad to talk about.	<u>56</u> 1631 TRUE	<u>38</u> 1115 FALSE	<u>6</u> 162 N.A.
(66)	60. It is easy to lose confidence in one's self.	<u>45</u> 1317 TRUE	<u>49</u> 1432 FALSE	<u>6</u> 159 N.A.
(67)	61. I do not mind being made fun of.	<u>47</u> 1371 TRUE	<u>48</u> 1392 FALSE	<u>5</u> 145 N.A.
(68)	62. I get angry sometimes.	<u>89</u> 2509 TRUE	<u>6</u> 185 FALSE	<u>5</u> 134 N.A.
(69)	63. I am liked by most people who know me.	<u>88</u> 2555 TRUE	<u>6</u> 178 FALSE	<u>6</u> 175 N.A.
(70)	64. I gossip a little at times.	<u>75</u> 2178 TRUE	<u>20</u> 576 FALSE	<u>5</u> 150 N.A.
(71)	65. If I could get into a movie without paying and be sure I was not seen I would probably do it.	<u>45</u> 1294 TRUE	<u>50</u> 1466 FALSE	<u>5</u> 148 N.A.
(72)	66. It would be better if almost all laws were thrown away.	<u>7</u> 213 TRUE	<u>88</u> 2560 FALSE	<u>5</u> 135 N.A.

MILITARY INSTALLATIONS AND UNITS INCLUDED IN SAMPLE

Army Ground Forces

Fort Jackson, S. C.

119th Inf Reg	161
59th Ord Op	74
802nd Repl Dep	185
1158th Eng	39
117th Inf Reg	55
120th Inf Reg	98
90th Chem Mortar Bn	123
15th Armed Gp	141
506th M P Det	113

Fort Bragg, N. C.

13th Air Borne Div	465
442nd FA Gp	148
804th Repl Bn)	155
782nd Arm Bn)	
1st Army HQ Co	19
27th Det Hq Spect	26
3rd Cav Recon Sqd	31

Army Service Forces

Fort Jackson, S. C.

MP Det A	54
Pers Repl Depot	87
Rehab Center	47
1458th PCW Det	45

Fort Bragg, N. C.

MP & Sta Comp Det	248
Separation Center	148

Beale Field

Hdq Det Prd	385
Prd Cadre	92
Perm Party	160
Hdq Det SCU	142
Sep Center Co A	100
ASF Hospital	74
Sep Center Mess Co	142
3rd Bn Prd	228
FW Det	54
MP Det	29

Army Air Force

Hammer Field

B Sqd	108
A Sqd Admin & B Sqd radar and radio operators	125
E Sqd Ground Crew	346

Maxwell Field

X Sec of Squadrons A, A1, A2, B, B1, C, C1, C2, C3, E, O, S, Q	731
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March Field

Ground Crews	233
Returnees	117
Flying Personnel	161
Miscellaneous	146

Total Questionnaires col- lected	5,835
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Note: A few of the returned questionnaires were either illegible or too incomplete to be usable so that the final number of usable questionnaires was 5,810 (2908 A's; 2902 B's).

INTRODUCTORY TALK (SPIEL) USED BY CLASS LEADERS

The Research Branch of the War Department, located in Washington, has been getting the opinions of EM and officers for several years on a wide variety of subjects and problems. The information that is obtained in this manner is used by the brass hats in making more intelligent decisions--decisions which affect all of us as long as we're still in the Army.

Today we're interested in getting your ideas on certain things but before passing out the questionnaires there are a few points I'd like to make clear.

First--this is not a test or examination; there are no wrong or right answers. We just want your honest opinion.

Second--do not put your name or serial number anywhere on the questionnaire. Nobody on this base (or camp) will ever see these filled-out questionnaires nor is there any way for anybody to identify you with what you have written.

Some of the questions are in two parts. The first part asks how you feel about a certain thing; the second part asks how strongly you feel about it. It is very important that both parts of such questions be answered--do not skip anything!

Certain of the questions may sound a little silly to you. However, they have been developed over a period of time by the Adjutant General's Office through interviewing thousands of soldiers and they all have a definite purpose in providing very helpful information.

Take as long as you like with the questionnaire; there is no time limit. Should you have a question just raise your hand and I'll be glad to try and answer it for you. But before turning in your questionnaire check through it and make very sure you have answered every question.

INSTRUCTIONS FOR CLASS LEADERS

The job of acting as "class leader" for a group filling out an opinion questionnaire will probably be different from anything you have done in the military service or civilian life. Experience in public speaking, school-teaching, military instruction, or interviewing are all helpful, but the purposes here are different. You will not be trying to teach anything, and, unlike most things in the military service, your success will depend not on giving good orders, but on securing the voluntary and willing cooperation of the men.

As class leader you will have three main duties:

1. To establish and maintain a feeling of interest, confidence, and cooperation on the part of the men.
2. To convince the men that their frank and honest opinions are wanted --that this is not a test and not a matter of facts but one of opinions.
3. To answer questions and make explanations, without in any way influencing a man's opinion.

The 'Guide to Class Leader's Introductory Talk' is designed to accomplish the first two of these functions, but you can't depend on that alone. Your success will also depend on knowing how to handle many different situations that may arise.

1. Establishing and Maintaining Interest, Confidence and Cooperation
The essential things here are to do everything in a friendly way, and to convince the men that their papers will not be identified or held against them. In order to have confidence in the study and to be willing to give their real opinions, they need to know the purposes of the study, how the plan works, what is done with their questionnaires, and whether the information is really used after it is obtained. This will usually be accomplished by the prepared introduction, but if you notice that some point is not going over, or that the men are suspicious, you should deviate from the prepared introduction and explain or emphasize further. The men's confidence will also depend on your own confidence in the survey.

Everything possible should be done to make the men feel at ease.

Keep questionnaires and pencils inconspicuous until time to give them out.

Smoking helps to ease tension, and it should be allowed if at all possible. The decision is up to the person in charge of the building, but he will usually be willing to allow it if the class leader will explain that smoking is a big help in getting the job done. If a mess hall is being used, the Mess Steward will usually provide

saucers for ash trays, and allow smoking on condition that the men use the ash trays. If necessary, the officer in charge of the survey can help to get permission for smoking. If smoking cannot be arranged for, it is well to tell the men you would like to let them smoke, but that it couldn't be arranged.

When the classes are scheduled, an effort is made to get all the men on duty time. When, as sometimes happens, a whole group or part of the men have to be taken on their off-duty time, the class leader should know it in advance. In such cases it is naturally harder to get the men's full cooperation. As one of the first points in the 'Guide to Class Leader's Introductory Talk,' a statement something like the following should be made:

'I understand some of you fellows are here on your own free time. We don't like to ask you to do this on your own time, because it's military business and should be done on duty time. But it seems it couldn't be arranged any other way in this case....'

2. Convincing the Men That Their Opinion is Wanted This may sound simple, but actually most men have become so used to tests and giving the right facts, that the idea of an opinion or attitude study doesn't sink in very fast. Experience has shown that after the 'opinion' idea has been repeated over and over, some men will still want to copy from the next man or give what they think are 'right' answers. If many men do this, the whole purpose of the survey is defeated. As you answer questions and stroll through the class, you can continue to emphasize that each man's own individual opinions are wanted.
3. Answering Questions and Making Explanations It is easier to fall down on this job than on any other the class leader has. Conceivably a class leader could purposely influence a man to answer in a certain way, but that isn't nearly as likely to happen as that the class leader will influence the men in one way or another without ever realizing he has done it. This can be done by the way something is said, or by what is left unsaid, just as much as by what the class leader actually says. Suppose, for example, a man is answering the questions, 'What branch of the Army do you think most highly of?' and he asks the class leader, 'What is the Quartermaster Corps--what do they do?' If the leader replied in a slighting tone of voice, 'Oh, they're the fellows that gave you those misfitting clothes,' the man would not have a very high opinion of the Q. M.

In other words, you must be strictly neutral in everything you say. Don't suggest answers to a man (except the printed check list in its entirety), and don't put words into his mouth. Never laugh at a man's question or seem surprised at something he says or asks.

You can define a word for a man, explain how the question is set up, explain the instructions, or call his attention to instructions he overlooked, but don't re-word any questions. This principle must be followed in order that the men of the various stations and outfits will all be answering the same questions, rather than slightly different ones at each place. It is surprising how just reading over

the question with a man, slowly and with emphasis in the right places, will make it clear to him. 'Just say what you think' or 'I can't tell you what your opinion is' are good answers for the man who wants you to give him a hint as to how to answer. If he doesn't know, he can always check or write in 'don't know.'

Other Points to Remember

1. Never refer to the questionnaire as a test.
2. If a man cannot read or write enough to fill out the questionnaire, excuse him from the group. (Don't announce that such men are excused, but watch for them as you stroll around the room. Mark a large 'X' across the front of questionnaires that have been started by these men, and turn them in with the completed ones.)
3. If a man absolutely refuses to fill out the questionnaire and if persuasion fails, excuse him. Do this as quietly as possible and merely as a means of eliminating a disturbing element, rather than as an act of discipline.
4. As far as possible, no names should be called or mentioned in the class. Check attendance merely by number of men present from a given outfit. Unless attendance is very poor and there is no other way to check on those absent, do not allow an officer or noncom to call the roll. If a noncom in charge of a group gives you a list of those in his group, thank him, and then tear it up in front of the men. Sometimes it helps to create confidence if the men see you do this.
5. In making our arrangements for the classes, we specify that no officer shall be present. If one comes in and hangs around the group, you should explain that you are working under orders that no officer be present.
6. Remember that no one is allowed to see the questionnaires after they are filled in. If an officer should come in and ask to see them, explain to him that you are working under Department of Defense orders not to let anyone see them. It is probably a good idea for the class to see and hear you do this.
7. If 100 men are supposed to be in class and 90 show up, don't worry. But if only 60 show up, get the information to the officer in charge of the survey as soon as possible.
8. Groups of men should not be kept waiting more than 10 or 15 minutes. If most of the men come early, or if some are late, it is better to give the introduction to those present and get them started, then take the late-comers in the back of the room and give them the introduction separately. While you are giving the first introduction someone should be stationed at the door to keep out late-comers.
9. If a few stragglers from one group are still writing when the next group arrives, these should be moved to a corner of the room and

the new group brought in. The 'stragglers' should be allowed to write as long as they like.

10. As each man finishes, he should leave the room, so as not to disturb those still writing. If the person in charge of the group want them to march back, they should wait outside; otherwise each man should return to duty as he finishes.
11. If anyone suggests that the purpose of the 'background questions' is to identify the man who filled out the questionnaire, tell him 'Nobody in Washington wants or needs to know the particular individual who filled out a questionnaire--checking up on anybody just isn't the purpose of the survey. I suppose if someone wanted to go to all the trouble involved, they could figure it out in some cases. You'll just have to take my word that that won't be done.'

STEPS IN THE CLASS LEADER'S JOB

1. Become thoroughly familiar with each questionnaire form, and all the questions in them.
2. Study and digest the 'Instructions for Class Leaders,' so that you will be prepared to handle any situation that may arise.
3. Learn the 'Guide to Class Leader's Introductory Talk' well enough to be able to read it clearly, smoothly and informally in front of a group of 50 or more soldiers. Preferably you should know it so well that you can 'talk it' in your own words. (If you do the latter, be sure you get in all the ideas in their proper order, and don't add any. This is important; otherwise, we wouldn't have consistency between classes.)
4. Be sure you have a complete schedule of the groups you are to lead, giving time and place of meeting, exact designation of outfits to be represented, number of men from each outfit, and a phone number to call in case the men do not show up or things do not work out as planned.
5. Get questionnaires and pencils in advance, or arrange for them.
6. Arrive at place of meeting preferably a half hour before scheduled time--in any case not less than 15 minutes before time. (Unit officers frequently move up the schedule time, in order to be sure that the men get there on time. As a result, the men arrive early.)
7. Find out if smoking can be permitted, and, if necessary, arrange ash trays.
8. Meet the men as they come in, and indicate where they are to sit. (They should sit as close together as possible during the oral introduction, then spread out for the writing.)
9. Find out from the men whether any considerable number are there on off-duty time. If so, make a note to include the special announcement in the 'Guide to Class Leader's Introductory Talk.'

10. Count the men to see if the expected number show up from each outfit.
11. When most of the men have arrived, give informal explanation of what the meeting is about. (See 'Guide to Class Leader's Introductory Talk:')
12. Give out pencils and questionnaires, then have men spread out for writing.
13. While the men are writing, stroll around the room answering questions, watching for men who are having difficulty, and preventing in a friendly way, any talking or looking on the other man's paper. In doing this be sure you don't appear to be 'snooping' or reading their answers.
14. Make an announcement reminding the men to check back and look over their questionnaire before they turn in their papers.
15. Be sure to keep blank questionnaires separate from the completed ones.
16. Designate a place where the men are to leave their questionnaires and pencils as they finish.
17. Thank the men as they finish.
18. Fill out the 'Individual Unit and Class Record' sheet and put it with the completed questionnaires for the unit.
19. Turn in completed questionnaires, blank questionnaires, and pencils to the person in charge of the survey. (You are held responsible for the exact number of questionnaires furnished you.)
20. Keep notes on questions frequently misunderstood or points often raised by the men. At the end of the assignment write a brief report on the class record sheet giving these points and stating your own judgment of the questions, criticisms of the survey, evaluation of the methods used, and comments on the conditions under which it was given (this doesn't have to be long or formal--just notes on your impressions).
21. Return all questionnaires, instructions, and other materials furnished you to the officer in charge of the study.

FIELD OFFICERS' ORIENTATION MATERIALS--WHY ATTITUDE RESEARCH

The purpose of conducting attitude research in the military services is to establish an upward line of communication to provide the policy-maker with objective quantitative facts; policy-making officers need no longer depend solely on hearsay or subjective impressions based on limited observations. Top-level commanders and chiefs-of-staff agencies charged with grave responsibilities for plans and policies have wanted available to them relevant information upon which realistic decisions could and should be based. An extremely valuable element in this information has been a systematic knowledge of the attitudes and reactions of the men and officers in the lowest echelons who are directly affected by decisions made at the highest echelons.

As one of the largest employers of the nation's manpower, the military services have since 1941 made effective use of attitude research studies among military personnel.

Attitude research is obviously not a form of inspection. Military inspection, which describes actual conditions, and attitude research which reveals men's reactions to those conditions--both provide important information for realistic planning.

Attitude research studies are conducted at the specific request of staff agencies or commanders; the studies are designed to obtain information needed by the requesting staff agencies or commanders. As a by-product, attitude research studies provide the best check we have of whether the boys who write letters which make their way into public print or into the halls of Congress are really typical of soldiers generally, or whether they are merely an unrepresentative fringe of chronic gripers. In general, the staff agencies making the most frequent use of attitude research are those agencies which--

- make policies;
- plan programs;
- are concerned with morale;
- provide services;
- disseminate information.

With regard to policy matters, for example, it is frequently of value to determine:

- (1) In the case of existing policy--
 - ...do the officers and men know about it and understand it?
 - ...are they in sympathy with it?
 - ...do they feel it is being carried out as intended?
- (2) In the case of proposed policy--
 - ...what is likely to be its effect?
 - ...how are the officers and men likely to react to it?

USE OF ATTITUDE RESEARCH DATA

The immediate aim of attitude and opinion research in the Armed Forces is to gather, analyze, interpret and deliver facts--facts which furnish sound guidance for policy formation to the staff agency or commander requesting the study. In this connection, there are two points which need to be made absolutely clear.

In the first place, attitude studies are not a means of military personnel voting on how to run the military service. Rather, such studies are an application of one of the best modern personnel procedures; they are a means for taking some important factors into consideration when framing certain policies and programs. The operational problems involved in maintaining, during peacetime, a modern force as large as ours are numerous and complex. No nation has ever maintained a military force in these numbers, essentially on a volunteer basis, in peacetime. It is a problem new in all history; a problem for which there is no body of experience--no blueprint to show the proven requirements of the job. Hence, those persons charged with the responsibility for the development of certain kinds of long-range plans, for a force of this size, have found it useful to determine rather exactly, on occasion, just what ideas were prevailing. And it remains necessary to continue this, even though the military service must be essentially authoritarian in many respects. To maintain absolute authoritarianism over the lives of the great number of American young men in the military service today would be to negate, completely, our professed obligation to provide these men in the military service with 'a healthy mental, moral and social climate with full opportunity for intellectual and civic growth.'

Obviously, the larger the military organization becomes, the harder it is for those officers responsible for high-level planning to keep in touch with the reactions of military personnel. In this situation, carefully planned and executed scientific attitude research studies afford higher headquarters a reliable method for keeping well informed about the ideas prevailing in the large and widespread military population--as well informed as a good company commander can be as a result of getting around in his unit and talking and working with his men.

The second point about the use of attitude research data is that in reporting the findings of attitude studies, it is not the function of the research staff to tell any staff agency how to run its job--the facts presented in research reports are simply one additional aid to the study client in planning operations. The study client's experience, plus his knowledge of other pertinent factors, enables him to fit research facts into his planning procedure.

QUESTIONS OFTEN ASKED ABOUT ATTITUDE RESEARCH

'Why can't I conduct my own study?' Any one can ask men questions. Scientific attitude and opinion research however, is much more than the simple process of counting up the 'yes' or the 'no' replies to questions. If 'prediction pollsters' can go 'haywire' on technique and judgment, how can the completely inexperienced, untrained person lacking any basis of scientific judgment in matters statistical and psychological expect to obtain valid results by conducting 'his own study?' In short, no one has yet found a way to circumvent the axioms of the 'scientific method,' in any field of scientific research. As a field of specialized social science research, scientific measurement of attitudes and opinions has its own special disciplines and techniques, such as interview rapport, question bias and semantics, sampling statistics, scaling

of attitude items, analytical methods and proper design of controlled experiments to mention only a few.

Furthermore, if attitude research in the Armed Forces is to yield objective results, if it is to give the commands dependable information upon which policy decisions may justifiably be based, the services of highly skilled and thoroughly trained research technicians who are recognized experts in this new science are required.

In the Attitude Research Branch no report on a study can be published until the analysis of the data which is to be presented has been checked and rechecked to insure that it meets the professional requirements of accuracy and dependability upon which Armed Forces research clients rely. A single failure to meet these exacting scientific conditions would serve to discredit the professional competence of the Attitude Research Branch staff and of all their future work.

'Why was I never interviewed?' Many officers and men ask this question--and imply, thereby, that any study results in which their personal reactions were not included cannot be truly representative. This feeling reflects a failure to understand a fundamental concept which is the keystone of scientific statistical sampling techniques. This concept is analogous to the fact that a doctor can establish, with a high degree of accuracy, the cell count of a person's entire blood stream by analyzing a sample of only a few cubic centimeters of his blood. Similarly, if the problem for a research study is one on which attitude and opinion research techniques are applicable it is not necessary to interview all, or even a large proportion of the military personnel in the United States to determine their attitudes and reactions.

This concept is founded on the fact that the accuracy of the results of an attitude research study depends less upon the number of men interviewed than upon the representativeness of the sample of men selected to be interviewed. Or, stated another way, if relatively small percentages of men are to speak for the many, they must be scientifically selected so as to be representative of the many. If this condition is satisfied, the results will closely approximate the results obtained if every man were surveyed. To meet these conditions in conducting an Armed Force study, every effort is made to insure that the cross-section of men selected to answer questionnaires is in every respect typical of the particular Armed Force population to be studied. A cross-section of enlisted men in the United States, for example, is so drawn to give proper proportionate representation to each branch of the Army. Cross-sectional studies may also be made of a single branch, or a Division, or any other segment of the military population desired. The number of men included in a study, in each instance, is made sufficiently large so that statistically reliable findings will be obtained.

'Do attitude research studies affect morale?' Commanding officers, who have some of their troops included in the sample of a study, sometimes raise the question as to how research studies affect the morale of the men studied. The fact is that all experimental evidence on this problem indicates that filling out research questionnaires has no effect on men's morale one way or the other--morale is neither raised nor lowered by this procedure.

'Do the military services use the same attitude research techniques as do commercial polling agencies?'

In a very general way, the procedures for conducting attitude research in the Armed Forces parallel those used by commercial

agencies polling the civilian population. With regard to specific techniques, however, there are important differences.

Questionnaire administration With few exceptions, commercial polling agencies place primary dependence upon having personal interviewers ask their respondents questions from a prepared questionnaire. One of the exceptions: questionnaires are sometimes sent by mail for the respondents to fill out. The percentage of non-returns, in spite of follow-up letters, plus the problem of adjusting the sample to explain and account for the non-returns, places a distinct

limitation on the value of studies conducted by mail. The personal interview procedure also confronts the commercial polling agencies with a limitation: the perpetual problem of interview bias. This problem has several facets: (1) the reaction of the respondent to the interviewer (that is, will the respondent feel free to answer questions honestly asked directly by another person, especially a stranger,) (2) the possibility that the interviewer may, consciously or unconsciously, influence the answers of the respondent by the inflection of his voice as he reads the question, or even by rewording the question, and (3) the possibility that the interviewer may make an error in interpreting or in recording the respondent's answers. In short, when complete dependence must be placed on interviewers, no matter how well trained they may be, the research agency can never be sure that every respondent was reacting to the same pattern of interrogation which the questionnaire was designed to cover.

From the outset, the Attitude Research Branch reduced to a minimum the difficulties associated with interview bias by the use of self-administered questionnaires. In adopting this advantageous technique, however, the Branch quickly discovered that its questionnaires, in order to be reliably filled out by the respondents themselves had to be composed of questions which were nothing less than pellucid in their specific implications. To achieve such a degree of clarity in question phrasing may require numerous pre-tests of the questionnaire and thus prolong considerably the time required to develop a study. Even so, until it is certain that every question will be clearly understood by all the respondents--and that each question will be understood in the same way by everyone--a questionnaire is not ready for final field administration.

When a questionnaire is finally considered to be 'ready,' the field administration is carried out by several field teams of officers and enlisted men specially trained for this work. Within any given unit included in the overall design of the sample, the men who are to fill out the questionnaires are drawn by a method of systematic random selection (referred to as Nth man selection) by the members of the field team. For example, if 100 men are to be studied in a specific unit with a strength of 1000, every tenth name is drawn from the unit's roster (or Form 20 file). The men whose names are drawn are assembled in groups of about 50 in a mess hall or classroom. There the trained class leaders of the field team (1) explain the purpose and method of the study, (2) assure the men that they are not being tested, (3) make it clear that what is wanted is simply a frank expression of opinions, and (4) above all, stress the fact that the study is conducted completely anonymously--that no names, serial numbers, or unit identifications are to be placed on the questionnaires.

The general procedure described for selecting respondents and administering the questionnaires in groups applies for both officers or enlisted men, except that officers of the field teams always act as class leaders for officer respondents and enlisted men are class leaders for the enlisted respondents. With the very personal questions the Branch frequently asks, trying to convince the officers or men in such groups that only honest answers are desired--that we are not interested in the identity of the respondents--involves an important selling job on the part of the field workers. The utter frankness of many comments written by the respondents, plus the rarity of flippant 'wisecracks,' indicates not only a successful job by the field workers, but, in addition, a realization on the part of the respondents that the ultimate purpose of these studies is to make the military establishment more effective.

Sampling technique Commercial polling organizations have, in the past, usually depended on what is called a 'Quota Control' technique of sampling in the population to obtain their interviews. The interviewers are assigned to question a specific number or quota of persons of various types (young and old; rich, middle-class, and poor, etc.) in various

localities (city, suburban, rural). These quotas are derived from census (and other) data and are apportioned on what is assumed to be required to obtain a cross-section sampling of the population. Since the interviewers often have a great deal of leeway in selecting the respondents, there is always the danger that the sample will be biased one way or another. For example, it is ordinarily easier for the interviewers to approach and question persons in their own economic or educational level. It is difficult, therefore, to be assured that all interviewers will do a thorough job on that part of their quota which involves the poorer sections of a community. As a result, since the interviewers are usually drawn from the middle class, there tends to be a skewing of the quota sample toward the upper part of the economic scale.

The sampling technique used by the Attitude Research Branch has two distinct advantages which are acknowledged (and much envied) by commercial polling agencies dependent upon the 'quota' method. First, the monthly strength reports on all military units provide a current and continuous check on certain census data of the military population. (Commercial polling agencies must wait ten years to obtain complete U.S. Census data and then keep making extrapolations to adjust the data to population changes assumed to occur during the intervening years.) Second, when the final sampling plan has been designed to meet the requirements for a particular study, it is possible to stipulate with essentially 'pin-point' precision the specific installations to be visited, the particular units to be included in the sample at each place, and the exact number of officers or men in each designated unit to be drawn by Nth-man selection (as previously described) to fill out the questionnaires. (Such exactness is in considerable contrast to the leeway in selecting respondents afforded interviewers working on a 'quota'.)

Scaling of Attitude Questions The use of a single question to measure attitudes and opinions has been a controversial problem among experts in this research field for some years. In most instances, the syndicated stories which appear in our daily papers reporting a poll of public reaction to some current social or political problem are based on single questions. From a research viewpoint, complete dependence on a single question to give an accurate reflection of the people's attitudes and opinions about a complicated subject entails a considerable hazard. How would you answer such questions as: 'Are you in favor of the United Nations?' 'Do you think the United Nations can prevent wars?' Could you answer with simple 'yes' or 'no' responses?

To avoid the hazard associated with the use of single questions, the Attitude Research Branch pioneered and refined the concept of 'scale analysis' in attitude and opinion research. This technique is a complicated mathematical operation which the Branch has been using for about five years. The basis of this technique is the use of a series of 'scaled' questions rather than a single item, to determine attitudes. Thus in the development of a questionnaire for any study, research personnel keenly scrutinize every 'subject area' being investigated as to whether or not it will lend itself to 'scale analysis.' This technique gives maximum accuracy to interpretation by permitting the analysis of not one, but a series of reactions on a specific subject.

Numerous articles have been published in professional journals on 'scale analysis,' as used in the military service. It should also be mentioned that during the last several years this new scaling technique has received increasing acceptance by commercial research organizations.

FIELD WORK

Field work required in connection with attitude studies is defined as the operation of interviewing or administering questionnaires to selected representative samples of military personnel.

This operation is a very important part of the study, and conducted in a comparatively well controlled situation. The manner in which field work is conducted affects not only the value and accuracy of a research study itself but also is a factor in developing favorable reactions on the part of military personnel to this activity.

The procedure for requesting studies, the development of a questionnaire and the development of a sample design, etc., are covered in 'Soldier Opinion.' You, as a field officer, generally are not directly concerned with these activities but you should be familiar with them. Questions will be asked you in the field, and you should be able to answer them with a reasonable degree of specific information.

Your Duties: In conducting field work, you as an officer are responsible for:

- a. Obtaining the rosters needed for drawing the sample.
- b. Drawing the sample.
- c. Scheduling classes for the personnel who are to complete the questionnaire.
- d. Conducting the classes.
- e. Completing field reports and safeguarding completed questionnaires.

The Sample The sampling method is designed to meet the specific requirements of each study. Field officers will be thoroughly briefed prior to starting a field operation on the particular sampling method to be used in the study underway. There are several general points about the sampling procedure used on any study, however, which must be stressed. This Branch uses attitude research techniques which are as nearly accurate scientifically as it is possible to make them. This fact is important, because the sample you draw must also meet the same rigid standards in accuracy employed in its design. There can be nothing slipshod in the methods of sampling in the field; you must be conscientious and honest in following the specific instructions given you for drawing the sample. Any sampling method is designed to insure that all persons in the group under study have an absolutely fair and equal chance of being included in the sample. You must realize that, if the responses of a comparatively few persons are to be an accurate representation of what the whole group would have responded, then the sample you draw also must be an accurate representation of the whole group.

Scheduling Classes Your next job after drawing the samples, is to set up a class schedule. Classes are to be conducted, unless absolutely impossible, on duty time. There are no set rules as to just how this should be done but the following suggestions have been found to be practical:

- a. Set up enough classes so that size of groups can be limited.
- b. Interfere as little as possible in the normal operation of the unit. Set up schedules for the convenience of the unit rather than your own.
- c. Personally make sure that unit commanders are furnished notice of the persons to appear, of the location, and of the time schedule.
- d. Be sure that classrooms have been reserved, have facilities for writing, have heat and/or lights.
- e. Make sure every class leader is present and gets to the classroom fifteen minutes before the class.

Completed Questionnaires Completed questionnaires must be safeguarded. Under no conditions are you authorized to allow anyone on the installation to read them. If you are to mail the questionnaires back to the office, get them on the way as soon as possible. Fill out an 'Individual Unit and Class Record Sheet' for each group attending each class. Fill out the 'Camp Record Sheet' before completing work at each installation.

Observing Conditions In addition to administering the questionnaire, you should be especially observant of the conditions in the unit being surveyed. Pick up all of the information you can which has a bearing on the areas being studied. Talk to the officers and if you discover conditions which may have a bearing on certain attitudes being studied, be sure to make notes so you can inform the analysts upon your return. Information of this type is especially helpful in analyzing the results of the study.

Dealings with Units Visited The military side of your job is also important since to the people visited you represent Washington. On the surface it may seem trite to remind you that you must exercise tact in your dealings with the units you visit. The fact that you come with a mission to perform will be recognized by the unit but you must be aware of the fact that the unit also has a mission to perform. In order to accomplish your mission you will have to disrupt the regular activities of the unit. Be firm in your dealings but cooperate in every way possible. It is so much easier to get the job done if you make friends than it is to try to force your way. A part of your military job, when conducting a field study, is to inform the commanders concerned about the study. Except for the information contained in the clearance, commanders normally will know nothing about the study itself. They even may be rather hazy in their ideas as to what to do. Make it a point to give them enough information about the study as a whole to elicit their interest. If necessary, briefly explain the procedures for preparing and administering studies and above all state specifically what you have to do in their units. They have a right to this information; give it to them.

Summary The following list of 'tips' will be helpful in planning your trip and conducting the field work:

- a. Check your orders and clearances, plan your itinerary, obtain T/R's, make transportation reservations, and sign out before you depart.
- b. Sign in on arrival at an installation and report to the Adjutant.
- c. Be prepared to explain your mission and your plan of operation to commanders and staff officers concerned.
- d. Insist on drawing the sample yourself.
- e. Set up your class schedule to conform insofar as possible with wishes of the commander.
- f. Be sure that commanders know what persons are to report to classes, where and when.
- g. Prepare a schedule of classes, to include number in each unit who are to report to a class, location and time for your own use in checking the actual operation.
- h. Train your class leaders.
- i. Safeguard the completed questionnaires.
- j. Pay your respects to commanders and staff officers, pay your bills and sign out before departure.
- k. As soon as you know when you will finish an installation, don't forget transportation reservations to your next station.
- l. Get the names of the class leaders and their official addresses.
- m. Keep a list of your itinerary and reimbursable expenses (cab fares, porter fees, official pay calls, etc.) so you can put in for your per diem on your return.

MEMORANDUM

TO: Mr. Elinson
FROM: E. S. Marks
SUBJECT: Item analysis problem

DATE: April 24, 1953

1. Essentially the Kruskal-Wallis paper* deals with the case where we have N ranked cases divided into C classes (with n_i cases in the i^{th} class).

2. In the item analysis problem, it is assumed that the items are dichotomous so $C = 2$. In this case, the measure H proposed by Kruskal and Wallis is equivalent to:

$$H = \frac{(\bar{R}_0 - \bar{R})^2}{\frac{\sigma^2}{\bar{R}_0}} = \frac{(\bar{R}_1 - \bar{R})^2}{\frac{\sigma^2}{\bar{R}_1}}$$

where \bar{R}_0 = mean of class "0"

\bar{R}_1 = mean of class "1"

$\frac{\sigma^2}{\bar{R}_0} = \frac{\sigma^2}{\bar{R}_1}$ = variance of \bar{R}_0 = variance of \bar{R}_1

\bar{R} = mean of all ranks

3. Wallis and Kruskal state that if "the samples come from identical continuous populations and the n_i " (number of cases in the i^{th} class) "are not too small, H is distributed as $\chi^2 (C-1)$." For $C=2$, this means that \sqrt{H} is normally distributed with unit variance.

4. It would be desirable to have, instead of H, a measure which varies between 0 and 1. If we let:

*Kruskal, W. H. and Wallis, W. A. "Use of Ranks in One-Criterion Variance Analysis," J. Amer. Stat. Assn., 1952, 47, 583-621.

n = number of cases in class "1"

N = total number of cases

σ^2 = variance of ranks for all cases

then:

$$H = \frac{(\bar{R}_1 - \bar{R})^2}{\frac{(N-n)\sigma^2}{(N-1)n}} = N-1 \left\{ \frac{n(\bar{R}_1 - \bar{R})^2}{(N-n)\sigma^2} \right\}$$

$$\text{or: } \sqrt{H} = \sqrt{N-1} \left\{ \frac{\sqrt{n}(\bar{R}_1 - \bar{R})}{\sigma\sqrt{N-n}} \right\}$$

5. Assigning a value of 0 to one class and a value of 1 to the other, the point correlation between these values and the ranks is:

$$r = \frac{(1) \left[\sum_{i=1}^n R_{1i} \right] + (0) \left[\sum_{i=1}^{N-n} R_{0i} \right] - (n+0) \bar{R}}{\sigma \sqrt{n(N-n)}}$$

where

$$\sum_{i=1}^n R_{1i} = \text{sum of ranks in class "1"} = n\bar{R}_1$$

$$\sum_{i=1}^{N-n} R_{0i} = \text{sum of ranks in class "0"} = (N-n)\bar{R}_0$$

then

$$r = \frac{n\bar{R}_1 - n\bar{R}}{\sigma\sqrt{n(N-n)}} = \frac{\sqrt{n}(\bar{R}_1 - \bar{R})}{\sigma\sqrt{N-n}}$$

thus

$$r = \frac{\sqrt{H}}{\sqrt{N-1}}$$

6. Thus (since \sqrt{H} is normally distributed with unit variance when N, n and $N-n$ are large), r will be normally distributed with standard error:

$$\sigma_r = \frac{1}{\sqrt{N-1}}$$

if:

a. $N, n,$ and $(N-n)$ are all reasonably large (100 or more)

and b. r is not near 1

Note: This result is not new. It is merely an extension to the case of ranked data of very well known principles.

7. To use the above, it is desirable that the intensity scores be expressed as ranks. The difference will be slight but it would keep the statistical theory clean. This would be done as follows:

<u>Score</u>	<u>No. Cases</u>	<u>Cumulative No. Cases</u>	<u>Rank corresponding to the score*</u>
1	F_1	$M_1 = F_1$	$\frac{1}{2} (M_1 + 1)$
2	F_2	$M_2 = F_1 + F_2$	$\frac{1}{2} (M_1 + M_2 + 1)$
3	F_3	$M_3 = F_1 + F_2 + F_3$	$\frac{1}{2} (M_2 + M_3 + 1)$
4	F_4	'	$\frac{1}{2} (M_3 + M_4 + 1)$
5	F_5	etc.	$\frac{1}{2} (M_4 + M_5 + 1)$
6	F_6	'	$\frac{1}{2} (M_5 + M_6 + 1)$
7	F_7	'	$\frac{1}{2} (M_6 + M_7 + 1)$
8	F_8	'	$\frac{1}{2} (M_7 + M_8 + 1)$
9	F_9	'	$\frac{1}{2} (M_8 + M_9 + 1)$
10	F_{10}	$M_{10} = \sum_{j=1}^{10} F_j = N$	$\frac{1}{2} (M_9 + M_{10} + 1)$
<hr/>			
Total	N		

*Notes:

a) To simplify computation, omit the $\frac{1}{2}$ in the last column (i.e., double each rank and use $R_1 = M_1 + 1$; $R_2 = M_1 + M_2 + 1$, etc.). Average rank will be $N+1$. Then, if we compute σ by:

$$\sigma = \sqrt{\frac{\sum_{j=1}^{10} F_j R_j^2}{N} - (N+1)^2}$$

we have:

$$r = \frac{\sqrt{n} (\bar{R}_1 - N - 1)}{\sigma \sqrt{N - n}}$$

$$\text{or} = \frac{1}{\sqrt{N - 1}}$$

b) Assigning ranks in this way is the same as giving each score the average rank for all cases with the score, i.e., the F_j cases with score j should be assigned the F_j ranks from $(M_{j-1} + 1)$ to M_j (since there are M_{j-1} cases up to "beginning" of the score and M_j cases up to the "end"), and this makes the average rank $\frac{1}{2} (M_{j-1} + M_j + 1) = M_{j-1} + \frac{F_j + 1}{2}$.

8. The point correlation coefficient of the ranks is, however, only equal to 1 if the ranks are all equal within each category but different in the two categories--for example, if all n cases in one category are "tied" and have rank $\frac{n+1}{2}$, and all $N-n$ cases in the other category are "tied" and have rank $\frac{N+n+1}{2}$. It is possible to use an index which would be 1 if all cases in one category had ranks lower than all cases in the other category (but without requiring that ranks within the category be equal). Under these conditions, we have, either:

$$\bar{R}_1 = \frac{n+1}{2} \quad \text{or} \quad \bar{R}_1 = \frac{N-n+1+N}{2}$$

i.e., ranks in smaller class run either from 1 to n or from (N-n+1) to N.

Thus, we would have the maximum (absolute) value of $\left| \bar{R}_1 - \bar{R} \right| = \left| \bar{R}_1 - \frac{N+1}{2} \right| = \frac{N-n}{2}$

and the index:

$$I = \frac{\bar{R}_1 - \frac{N+1}{2}}{\frac{N-n}{2}} = \frac{2 \left(\bar{R}_1 - \frac{N+1}{2} \right)}{N-n}$$

would vary from -1 to +1.

Since I is equal to \sqrt{H} times:

$$\frac{2\sigma}{\sqrt{n(N-1)(N-n)}}$$

it is normally distributed with standard error:

$$\sigma_I = \frac{2\sigma}{\sqrt{n(N-1)(N-n)}}$$

As compared with r, I measures "one-way relationship," i.e.:

If $r = 1$, then:

- (1) when $R_a < R_b$, a is in 0 category and b is in 1 category;
- and (2) when a is in 0 category and b is in 1 category, $R_a < R_b$.

If $I = 1$, only the second part is true--one can have $R_a < R_b$ and a and b can both be in 0 category or both be in 1 category. However, for $I = 1$, the relationship $R_a < R_b$ does imply that b cannot be in 1 category unless a is also in 1 category and, also, the relationship (2) above holds.