



1959

A Tat and Picture-Frustration Study of Naval Offenders and Non-Offenders

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A TAT AND PICTURE-FRUSTRATION STUDY OF NAVAL
OFFENDERS AND NON-OFFENDERS

by

Francis Bernard Petrauskas

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Doctor of Philosophy

June

1959

LIFE

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CHAPTER I

INTRODUCTION

The primary purpose of the present study is to employ a relatively new method of Thematic Test analysis and in doing so, to investigate and describe some of the characteristic attitudes which differentiate the enlisted Naval offender from the enlisted man who has never been subjected to legal disciplinary action, either in the Navy or before enlistment. Aside from the theoretical value and importance of determining the fundamental characteristics which differentiate the offender from the non-offender, the present study has practical importance as to confinement and ultimate disposition of the offender. If an effective and rapid means of evaluation could be developed which successfully segregates the offenders, who are very poor risks and are likely to perform unsatisfactorily in continued service, from those men who possess the potential to function adequately in the Naval service, considerable assistance could be rendered to those units of the Naval Installation which are concerned with judicial procedures, confinement, and eventual disposition of military delinquents.

Legal officers, security personnel, and Administrative Commands of the Navy are concerned with the high incidence of

recidivism amongst confined Naval populations. Accurate figures are not available due to the extensive dispersion and varied functions of Naval Commands; however, it has been authoritatively estimated by responsible administrative personnel that as high as 80 per cent of those confined in the various brigs and Retraining Commands of the U. S. Navy, are recidivists. Since such a large number of offenders are repeaters, the following questions have frequently been raised: Why have these men become involved in difficulty again? At the time of court-martial, are there any specific indications, either overt or covert, that these men might face possible disciplinary action again? If these men are prone to frequent punitive action, why are they retained in the Navy? If it could be demonstrated that some men are inclined to frequent infractions of regulations, wouldn't it be better to discharge them immediately on grounds of unsuitability, rather than send them to duty and have them eventually return to confinement because of their disregard for regulations, excessively disturbed personality organization, and obviously poor motivation for service?

The present study is a search for a partial solution of this realistic problem. By comparing the most significant positive and negative personality characteristics of the Naval offender with those of the non-offender as they are revealed in the Thematic Apperception Test stories, it attempts by means of Arnold's "Sequential Analysis" (2,7,11), to differentiate the underlying

characteristics of the two populations. If significant differences are found to exist between the two groups, then the Thematic Apperception Test along with its method of analysis might be employed as a screening measure to evaluate the offender either before court-martial, or after completion of his confinement and anticipated return to duty.

The Thematic Apperception Test has frequently been used in studies attempting to investigate and predict behavior. However, the methods of analysis of the TAT stories have been highly variable (7), and the results at times inconsistent and inconclusive. Also, the majority of these methods, as they exist at present, are exceedingly time consuming and impractical for large scale testing and scoring.

The method of test analysis here employed is relatively new and scoring procedure comparatively simple. It makes possible the scoring of a significant constructive (plus) or non-constructive (minus) attitude shown in various areas: (1) towards others, (2) towards work and achievement, (3) towards a problem, (4) towards external forces, and (5) towards duties and obligations. Our hypothesis is that Naval offenders will give more stories expressing a negative attitude than stories expressing a positive attitude; non-offenders, on the other hand, will tell more stories expressing a positive attitude. There may also be a significant difference in the attitude categories between those two groups. It is maintained that the social adjustment of an individual could

be explained in terms of the presence or absence of plus or minus attitudes in these categories.

A secondary purpose of this investigation is more generally concerned with the problem of aggressive or acting out behavior as it is related to responses on psychological tests. Aggression is a variable which is assumed to be somehow involved in the social adjustment of the offender and non-offender. It is generally accepted that individuals confined in brigades, Retraining Commands, or prisons are incarcerated because of their aggressive, irresponsible, uncontrollable activity, while those not confined are either less aggressive or handle their aggressive inclinations in a different manner.

Since both the Thematic Apperception Test and the Rosenzweig Picture-Frustration Study give indication of the nature and possible intensity of aggression in an individual's fantasy productions, we propose to examine the possible association between these two tests. Although solitary consideration of the negative attitudes in the TAT stories is not a wholly adequate measure of aggressiveness, some relationship between these negative attitudes and externally directed aggressiveness on the Picture-Frustration Study could be assumed. Our hypothesis is that there is a significant relationship between the negative attitudes of the two groups as revealed in their TAT stories, and their extra-punitive scores on the Rosenzweig Picture-Frustration Study. Those individuals within our matched pair groups who possess a greater

number of negative attitudes should show a higher extrapunitive percentage score on the Picture-Frustration Study; those with a smaller number of negative attitudes on the TAT should show a lower extrapunitive percentage score on the Picture-Frustration Study.

A third aim of the present study is to determine the extent of the relationship between the Rosenzweig Picture-Frustration scores on extrapunitiveness for both groups. Since fantasy aggression is frequently expressed in overt behavior and disciplinary problems generally involve aggressive activity, some relationship between the present status of these two groups and their extrapunitive scores on the Picture-Frustration Study should be present. Hence, our hypothesis is that there is a significant difference in extrapunitive scores for these two groups. It is expected that within our matched pairs, a significantly greater number of offenders will obtain higher E percentage scores than the non-offenders.

In summary then, the primary and secondary purposes of the present investigation are an attempt to answer the following questions:

1. Can the Naval offender be differentiated from the non-offender in terms of the positive or negative attitudes he reveals in his Thematic Apperception Test stories?
2. Is there any similarity or difference between the TAT attitudes of the offenders and non-offenders and their extrapunitive scores on the Rosenzweig Picture-Frustration Study?

3. Does the Naval offender score higher than the non-offender in extrapunitive aggressiveness on the Rosenzweig Picture-Frustration Study?

The present investigation is principally concerned with a limited population, namely the offender. However, the results obtained would not be so strictly confined. Positive results will have implications for extension of the testing instrument and its method of analysis and scoring procedures to other problem areas involving psychological selection of Naval personnel. The methods here employed might very well serve as a psychiatric screening adjunct for the selection of Naval personnel applying for various restricted service billets such as submarine duty, the Deep Freeze expedition, nuclear power training, and other similar types of service.

CHAPTER II

REVIEW OF THE LITERATURE

A search of the voluminous literature since the introduction of the Thematic Apperception Test (32) and the Rosenzweig Picture-Frustration Study (34) has disclosed that neither of these two testing methods have been employed, either jointly or independently, in a systematic motivational analysis of segregated Naval personnel such as Naval offenders. Psychological evaluation and study of the Naval offender has been confined largely to: quantitative analysis based on interviews (43), quantitative analysis based on data derived from paper and pencil tests, or personal history froms (42,51), or other projective tests (27). Where the Thematic Apperception Test has been used with military personnel, the method was either basically modified (13,31) or involved the study of a single variable, e.g. aggression (41). Furthermore, the interest was solely to quantify the presence of the variable in the fantasy productions and to relate this to overt hostility (41).

The most pertinent, though only partially related, study using the Thematic Apperception Test and dealing with military

offenders is that of Harold Stone (41). Employing the standard Thematic Apperception Test, he studied three groups of Army prisoners which he categorized from least aggressive (25 men), through moderately aggressive (27 men), to most aggressive (31 men). Categorization of groups was based on gravity of offenses, ranging from AWOL or desertion in the least aggressive group to murder plus previous offenses in the most aggressive group. Each aggressive response on the TAT was categorized as involving a death content, a physical aggression content, or a verbal aggression content. These responses were weighted on a point system, 3-2-1 respectively. His assumption was that death concepts involve greater aggression and poorer control, and hence, are more related to overt aggressive behavior than the physical or verbal categories.

He found that his most aggressive group showed a greater amount of aggressive content than the moderate aggressives, but his hypothesis that the most aggressive group would show a greater amount of aggressive content than the least aggressive group was not clearly confirmed (.10). Likewise, the moderate aggressive group did not show a greater aggressive content than the least aggressive. The most aggressive group, however, did show a greater amount of aggressive content than the combined non-assaultive groups. The lack of consistent positive results may be attributed to the investigator's questionable basic assumption: that there is a positive relationship between "aggressive needs",

diagnosed by counting the number of death, physical, and verbal aggression themes, and behavior in real life situations. This assumption has not been supported by previous studies which have yielded somewhat varied but predominantly negative results. Sanford et al (49) found that aggressive themes were frequently expressed in the TAT stories of adolescent subjects but were infrequently expressed in overt behavior. The correlation between expression of aggressive themes in the TAT and ratings on the degree of overt manifestation was plus .15. Murray (5) found no correlation between the intensity of the aggressive need as expressed by aggressive themes and its overt expression. Symonds (9) similarly found no relationship between aggression in fantasy and aggression in overt behavior.

Another related study is that by Mussen and Naylor (33) which was concerned with the relationship between fantasy aggression and overt behavior in a group of lower class delinquents. Here the TAT stories of each subject were scored simply by counting the number of times aggressive acts appeared in the stories. These aggressive acts were related to two aggressive behavior rating scales filled out on each subject by a group of attendants and observers. Their hypothesis which states that among lower class boys, those having a relatively great amount of fantasy themes of aggression will indulge in more overt aggressive behavior than those who have relatively few fantasy aggressive needs was strongly supported.

The difference between these positive findings and previous negative results could be attributed to the consideration of other factors within the population used for the investigation. In the middle class from which Sanford and Murray's subjects were drawn, there are strong punishments for the expression of aggression. But in the lower class culture, aggressive behavior is not punished but encouraged. Thus, lower class boys who have many aggressive fantasies (hence, intense aggressive needs), will also readily express these needs in their overt behavior. Mussen and Naylor suggested that Sanford and Murray's negative findings were the result of a sampling artifact. Their adolescents were drawn from middle class homes where aggression is frowned upon. These boys would be afraid of rigorous punishment for aggressive acts, hence, would express aggression only in fantasy. Lower class culture, on the other hand, encourages rather than punishes aggressive behavior; hence, lower class boys would be aggressive in fact as well as in fantasy.

In their own study, Mussen and Naylor actually found a positive relationship between fantasy aggression (judged by counting the number of aggressive acts described in the TAT stories), and the behavior ratings of delinquent lower class boys, made by a group of attendants and observers. They also found a positive relationship between fear of punishment (judged by counting the number of instances in which such fear was expressed in TAT stories), and low overt aggression ratings in their sample.

Mussen and Naylor's findings at least suggest that aggressive themes taken by themselves do not give any clue to overt aggression, unless the underlying attitudes toward aggressive acts are considered as well.

This would indicate that the method of Sequential Analysis, which does not count themes, but takes the import of the story and considers each story in its meaning to the individual, would give better results in predicting aggressive behavior than the methods of TAT analysis used thus far.

A study which uses both the TAT and the Picture-Frustration Study is that reported by Husman (21). He compared the number, severity, and direction of aggressive responses of college boxers and wrestlers; before, after, and during seasons, and before and after a contest. The research was designed to compare the aggression of boxers and wrestlers with each other; with a control group consisting of cross country runners and non-athlete college students; and with a normal population. The TAT stories were scored for over-all intensity of aggression by counting and rating the severity of the aggressive words expressed. The direction of aggression was evaluated by noting whether the aggression was turned toward some person other than the hero of the story, or toward the hero. As measured by the TAT, boxers, possess less overall intensity of aggression than wrestlers, cross country runners, and controls--at the .01 level. On the Picture-Frustration Study, boxers possessed less tendency than cross country

runners and controls, to express their aggression outwardly. They tended to blame themselves more for frustration or gloss over it. Of the two tests, it was thought that the TAT seemed to be the best instrument for assessing aggression.

There is a curious lack of agreement amongst the tests used to measure aggression. On the TAT, boxers possessed less overall intensity of aggression than the other groups; while on the Picture-Frustration Study, they possessed a greater tendency than the wrestlers to express their aggression outwardly. Further, trends in the data indicate that a season of participation in sports tended to increase the aggression of participants as measured by the TAT, while it tended to lower the aggressive score on the Picture-Frustration Study. Although intra-test comparisons were not given, agreement between the TAT and the P-F Study in measuring the direction of aggression seemed to be minimal.

The writer has not found any studies which used the Picture-Frustration Study with Naval personnel. The test, however, has received a good bit of consideration, the principal concern generally, being its validity. It has been used with problem children (36), with psychotics (10,40), in investigation of ethnic and cultural differences (30), with institutionalized boys (28), in the study of prejudicial differences (24), induced frustration experiments (17), and in extra-sensory perception experiments (39). Observers are divided in their conclusions, and hence the validity of the Rosenzweig Picture-Frustration Study is not fully

established.

An investigation of special interest to the present study is that reported by Lindzey (23). His purpose was to determine the effect of frustration upon performance on the Picture-Frustration Study and to compare these results with comparable results obtained from the Thematic Apperception Test. His population consisted of twenty college students, very high in minority group prejudice, and twenty students, very low in minority group prejudice as measured by the Allport-Kramer Attitude Scale. Each group was divided into ten experimental, and ten control subjects individually matched in terms of prejudice score and approximate age. The P-F Study was scored according to standard instructions and samples of Rosenzweig; while the TAT was scored for extrapunitive behavior by counting the number of incidents in which the self-figure carried out aggressive acts against the non-self figures.

At the beginning of the experiment the P-F Study, and four TAT cards (8M, 3M, 20M, 16), were given to all the subjects. Two months later, the experimental group was subjected to severe frustration by another experimenter. Immediately after, all subjects took the same measures as before. Differences between groups were obtained by subtracting any shift in the control group scores between the first and second administration of the measure from the corresponding shift for the experimental subjects. The only prediction made was that the extrapunitive score would increase following frustration. Evidence confirmed this, and, (according

to the author), thus "supplies an affirmative answer to the major question of validity" of the P-F Study which the investigation was concerned with. The extrapunitive scores on the Picture-Frustration Study failed to correlate with comparable measures from the TAT, both before and after the frustration.

The author assigns the lack of relationship between the P-F Study and the TAT to such factors as: sampling error, broadness of the concept of aggressive tendency, the possibility that one of the two measures is not measuring what it is supposed to measure, and difficulty in comparing a relative measure of extrapunitiveness with an absolute measure. All these factors would seem to have some bearing on the final results; however, the fundamental problem of scoring extrapunitiveness on the TAT as a discrete variable without consideration of the outcome of the story, was neglected by the author. Perhaps some relationship would have been found if extrapunitiveness on the TAT would have been scored in the light of this factor.

The present study differs from the reported research in that it is primarily concerned with specific positive and negative attitude differences which underlie the adjustment of the Naval offender and non-offender. The term "attitude" is here employed, not in the frequently cited psychological definition of the term (1,4), but in assessing the general attitude of an individual towards life and its demands, attitudes which are expressed in the import of the stories.

Secondly, the present investigation differs from other studies with regard to the theoretical assumptions on which the test is based, and also in the method of Thematic Test analysis. In its beginnings, TAT theory emerged along with the development of a theory of personality. The mechanistic philosophy behind this theory is clearly evident in its hypothetical constructs of needs and press. In terms of needs and press, Murray has isolated an elaborate list of personality variables (5). These variables, with their need and press interaction, describe and differentiate the human personality in atomistic fashion. A majority of others (7), with more or less modification, have similarly developed the method along atomistic lines. Some (37) have rejected the need-press theory of TAT analysis because it is based on a theory of personality which itself has not been adequately verified. Still others (6,12) have based their analysis and focused their attention on style, structure, and other formal characteristics of the stories. A few (46) made the psychometric approach of intelligence testing the model for personality study.

Some have differed radically in their approach to TAT analysis. Arnold has developed an analytic method around the sequential analysis (2,7). This method is used in the present investigation. It differs from other methods both in its basic assumptions (26) and system of analysis. In contrast to the mechanistic rationale of the majority of the systems of TAT analysis, the basic assumptions underlying the method here used could be stated

as follows:

1. Everything imagined must have been experienced before in some way (in real life or in thought).
2. Each story with its stated outcome has a moral, proposes a conviction (either a casual conviction or one strongly held; in the latter case, more than one story will express it).
3. When the stories with their outcomes are formulated as propositions, they will give a statement of the person's philosophy of life.
4. This philosophy is a working philosophy, i.e., it indicates how people are thought to act or how they should act, what actions are right, or wrong, what will lead to success, what are the things to strive for, etc.
5. Each story with its outcome contains an indication of the way in which the person handles his impulses and emotions, rather than an indication of the kind of emotions he has or their intensity.

In the process of imagination, the individual selects from his mass of images, new combinations of images, and organizes them according to a scheme of values he has worked out in his actions. In this process there is control, in that organizing according to a scheme of values implies intellectual evaluation of actions. If the imagination is allowed to work freely it will give a realistic presentation of the individual's principles as they apply to life situations. Free activity of the imagination, however, is not identical with free association. Imagination is given full rein only in the sense that it is not used in the service of deliberate action, (e.g. for planning, working out problems, etc.). It sets up various situations and works through their complications. Since imagination works together with in-

tellekt (hence, uses habitual practical judgments), solutions will be found in accord with the principles which the individual would apply to a real life situation. Because imagination, working without deliberate control, will explore possible solutions for any problem a man may be preoccupied with, one story after another will express the various solutions acceptable or unacceptable to him. When the import of each story is put in sequence, the interpreter can evaluate the individual's habitual dispositions toward modes of action, proneness to emotional reactions, and hierarchy of values from his philosophy of life and also possible solutions to problems that agitate him. This is the type of information which is essential if one is to be successful in the prediction of human activity from Thematic Test material.

Whether a story contains an aggressive theme or not is far less important than the fact that the story-teller may approve of it (by letting the aggressor go scot-free) or disapproves of it (by having him punished). Therefore, the outcome is the essential feature that gives the key to the subject's thinking in the situation.

Arnold's method of analysis (modified) involves three steps:

1. Summarization of the story meaning. This is a summary of the story in terms of its actual meaning or import.
2. Sequence. When the significance of each story is summarized and put down one after the other, a pattern is generally found to emerge. It is this pattern or sequence that is used in the next step.
3. Interpretation. The pattern or sequence of the summary import of each story forms the basis of ultimate analysis.

The pattern indicates, (1) the subject's main problems, (2) their importance to him and possible solutions, (3) the basic motivational pattern of the individual's life, particularly his emotional attitudes as dynamic forces in his life.

The nearest approach to this method of Thematic Test analysis is that of Lasaga (7). Both Lasaga's method and that of Sequential Analysis involve the story summary. However, the two methods differ on several points: (1) In Sequential Analysis, the essential feature is the story summary or meaning; for Lasaga, it is only one part of a more extensive procedure. His procedure involves the following steps: reading the record for general impressions; underlining phrases which express the main idea or important aspects of the main idea; summarizing each story in terms of the main idea; finding clues for discovering the main conflicts; studying anomalies among the main ideas or among reaction times; taking into consideration "basic data" about the patient and knitting these impressions together into a summary evaluation. (2) Lasaga's summary of the story answers the question: What does the story talk about? In Sequential Analysis, the summary answers the question: What is the actual meaning or significance of the story? (3) Lasaga does not consider the sequence or pattern of story summaries which is the most important aspect of Sequential Analysis.

The method of Sequential Analysis has been employed successfully in an investigation reported by Snider (2) who was interested in demonstrating the effectiveness of the method in revealing

differences between the personality characteristics of high achieving and low achieving boys in high school. Categories of thematic material centering around reactions to emotional situations and goal-directed-striving were set up and the TAT stories of twenty high and twenty low achievers, matched for intelligence and age, were analyzed and scored with particular attention to the outcome of the stories. In this way, the high and low achievers were significantly differentiated.

It is noteworthy that in the exploratory state of this research, various situations and categories were set up and the stories analyzed without reference to outcome. The findings were insignificant, suggesting that the procedures of the traditional methods of TAT analysis yield different results.

The above investigation is similar to the present study with regard to the method of analysis of the TAT stories and also in the use of attitude categories. Subsequently, the method was simplified as here employed, thus facilitating the analysis and scoring procedures.

CHAPTER III

DESIGN OF RESEARCH

The subjects used in this investigation consist of two groups of Navy enlisted personnel stationed at the U. S. Naval Training Center, Great Lakes, Illinois. Group I, the experimental group, is composed of thirty enlisted men who are confined in the Naval brig for infraction of Navy regulations and the Military Code of Justice, and are awaiting Courts-martial. Except for two individuals who were involved in more serious aggressive activity, all were confined for being Absent With Out Leave on at least two occasions. In all cases, more or less serious delinquent history was present prior to service. Thus the experimental group as a whole experienced difficulty in social adjustment before enlistment and while in service. Group II, the control group consists of thirty enlisted men attending the Hospital Corps, Gunner's Mate, Electrician's Mate, Fire Control, and Electronic Technician Service Schools. All denied a delinquent history prior to service and none ever experienced even the minimum form of disciplinary action while in the Navy.

The individual members of the experimental group were paired with members of the control group on the basis of the following

criteria: age, General Classification Test score (which serves as a measure of intellectual functioning in the Naval service), race, and length of service. Two-thirds of each group were equated for level of education while in the remaining third, education was not held constant. As much as possible, location of residence was taken into consideration. That is, those subjects in the experimental group who resided in large cities were paired with those in the control group who lived in large cities; those in Group I who lived in rural areas were paired with those in Group II who lived in rural areas.

The procedure for pairing and equating one group with another was carried out in the following manner. After preliminary discussion with administrative personnel at the brig regarding its facilities, nature of its population, and daily routine procedures, approximately two-hundred and fifty confinees were given the following data sheet to complete:

Name _____ Present Billet _____

Permanent Home Address _____

Age ____ GCT ____ Race ____ Date entered Navy _____

Highest School Grade Completed 1 2 3 4 5 6 7 8 9 10 11 12

Because of incomplete information on some of the above data blanks, excessive dispersion of GCT scores, very short or exceptionally long periods of service, and imminent discharge of some confinees, approximately fifty subjects out of the two-hundred and

fifty who completed the data sheet, appeared suitable for possible pairing with subjects to be selected from the Service Schools who were to serve as the control group. Since the nature of the Service School population was known to some extent, it appeared advisable to limit before-hand the number of confinees to be tested.

Following selection of the fifty confinees most suited for purposes of this investigation, arrangements were made with the Personnel Officer of the Service School Command for distribution of the above personal data sheet to various classes throughout the Service Schools which contained students within the proscribed limits as set by the experimental group. Since a large segment of the Service School population consisted of older career personnel who spent in excess of ten years in the Naval service, they were not dealt with. Approximately twenty-five hundred data blanks were distributed to various classes of the Service Schools. The obtained data were then classified according to the established criteria. Those subjects whose personal data blanks most closely approximated the data blanks of the confinees were paired with them and selected for testing.

Because of the diversity of criteria on which the two groups were to be matched, much difficulty was experienced in obtaining a sizeable sample for study. For example, if an individual in the experimental group was adequately matched for one variable, a discrepancy generally would exist in one of the other variables. If an individual in one group was well matched with a member of

the other group on two or three variables, a discrepancy usually appeared in the remaining variables. Length of service proved to be the greatest stumbling block. In going through the two sets of personal data sheets, the one based on practically four-fifths of the brig population and the other on twenty-five hundred Service School personnel or approximately one-half of the total population, thirty pairs matched for age, intelligence, race, and length of service, were secured. Twenty of the pairs were accurately matched for education and seventeen were matched quite equally for location of residence.

Table I in Appendix I shows a comparison of the data for the criteria on which the individuals in the two groups were matched. The mean age level for each of the groups is 19.1 years. The mean General Classification Test score is 53.6 for the experimental group and 54.2 for the control group. A score of 54 on the General Classification Test approximates a Wechsler-Bellevue I. Q. score of 106 (Appendix II). For all pairs except three, the GCT scores varied zero to four points. In three instances, the paired scores varied seven points. In all three pairs, the members of the control group possessed the higher GCT score. All members of both groups were white in color. In length of service, the brig population had a mean value of 18.2 months of service and the Service School personnel, a mean of 19.0 months. Within pairs, the length of service varied from zero to nine months for twenty-nine pairs. The greater variations occurred in all cases with lengths

of service exceeding twelve months. In one case, the difference in length of service was forty-five months. Since this difference was in favor of the member in the control group, it was not considered to be prejudicial to the results. With regard to amount of education, twenty pairs were matched exactly for total amount of years completed in school. In the remaining ten pairs, precise matching was disregarded in order to facilitate the increase in the size of the sample and also to avoid distortion of the final results on the Thematic Apperception Test. It is a recognized fact that delinquent individuals who are confined for anti-social activity, are retarded in their educational development. Since there appears to be a correlation between educational development and delinquent and non-delinquent behavior, it was thought that complete control of this variable in terms of matching might have some negative bearing on the final results.

Location of residence in itself was not considered as a variable for which the two groups should be matched. Not only would it increase the difficulty in matching the groups but its actual purpose is ill-defined since the relationship between city or rural residence and nature of TAT content is unknown. At the same time, it was thought that both delinquent activity and general social activity in many rural areas differs from that of large cities and hence could possibly have some bearing on the test results. In view of this, the attempt was made, where possible, to match the two groups for location of residence. Seventeen pairs

were matched fairly accurately in this respect while it was impossible to do so in the other thirteen pairs.

The brig population was tested first. Since the facilities were very adequate, all testing was done at the brig. The brig mess hall for daytime testing and the Industrial Art shop for evening testing served the purpose very well. Previous studies have indicated that the results of group administration of the TAT are very similar to those of individual administration and so group testing was employed (19,25,45). The confinees were given the tests in groups of four, five, and six depending upon their availability for testing. They were seated at large tables and placed far enough apart to prevent close contact or discussion with those next to them.

No reason for the testing procedure was given. Occasionally, when questions were raised as to why they were being tested, the group was told that it will be explained to them after the testing was completed. Silence was maintained at all times while the tests were in progress.

The Thematic Apperception Test and the Picture-Frustration Study were administered at one sitting. The TAT was administered first. Each subject was provided with two sharpened pencils and thirteen sheets of blank paper which were stapled together. The following instructions for the TAT were read to the group:

"This is a test of imagination, one form of intelligence. I am going to show you some pictures, one at a time; and your task will be to make up as dramatic a story as you can for each. Tell what has led up to the event shown in the

picture, describe what is happening at the moment, what the characters are feeling and thinking, and then give the outcome. Write your thoughts as they come to you. There are thirteen pictures and you can devote about five minutes to each picture".

Three two by four index cards with the above instructions were conveniently placed on the table for reference and the subjects were urged to consult them whenever necessary. Thirteen of the standard TAT cards (Appendix III) were administered in the following order: 1, 2, 3, 4, 6, 7, 9, 11, 13, 14, 16, 17, 20. The subjects worked together on all cards. Card #1 was turned over and shown to the group so that all could see it. It was then passed around individually when necessary. When all the subjects completed writing their story the card was removed. Card #2 was then exposed and the same procedure followed as in card #1. While the stories were being written, the examiner moved about the group urging the subjects, where necessary, to follow the given instructions closely. On coming to card #16, the following instructions were given:

"As you can see, this is a blank card. Imagine any kind of a picture on it that you want and then tell a dramatic story about it just as you did with the other cards".

When the thirteen stories were completed, a short break was given before administration of the next test.

In the administration of the Picture-Frustration Study, the Revised Form for Adults, consisting of twenty-four cartoon-like pictures in booklet form (Appendix IV), was placed before each subject. They were then instructed to place their name at the top

of the page, to read the instructions given on the front of the booklet, and then to proceed with the test.

The entire testing procedure consumed approximately one hour and thirty minutes. When all the testing was completed, each of the confinees was interviewed individually to verify the reason for his confinement and his social history prior to enlistment in the Navy.

With the control group, all testing was done at the Neuropsychiatric Unit, a facility of the Training Center which is primarily concerned with the screening and evaluation of the incoming recruits. Those subjects selected for testing were notified, via the Personnel Officer of the Service School Command, to report to the Neuropsychiatric Unit. In doing so, many showed concern and inquired about the reason for their being called to the Unit. Just as in the case of the confinees, they were told that the reason would be explained to them after the completion of testing.

The subjects, numbering four to six in a group, were seated at a large table generally used for conference purposes. The same equipment, instructions, and test procedures were employed as in the case of the brig population. Upon completion of the testing period, the reason for their being tested was given when each of the subjects was interviewed individually for verification of their disciplinary record in the Navy and their social adjustment before service.

After obtaining the test records of the thirty matched pairs,

ten matched pairs were arbitrarily selected for analysis and scoring according to the attitude categories which were tentatively established. The purpose was to analyze and systematize more accurately the differences in categorical attitudes of the two groups. The five categories or areas, namely, (1) attitude toward others and self, (2) attitude toward work and success, (3) attitude toward a problem, (4) attitude toward uncontrollable external forces, and, (5) attitude toward duties and obligations, initially were set up in rather broad outline, and the purpose now was to analyze and score the fantasy productions of these ten pairs and introduce detailed descriptions in the categories where necessary in order to differentiate the groups more precisely. After the attitude categories were elaborated upon, more precisely differentiated, and set up in final form (Appendix V), the ten pairs of protocols were placed with the other twenty, coded numerically, identifying information removed, and shuffled.

All sixty records of the TAT were analyzed according to the method of Sequential Analysis as described in the preceeding chapter. A mimeographed work sheet (Appendix VI) was prepared on which the sequential analysis of the stories were typed. Each of the stories within the sequence were first scored as plus or minus, depending on whether the attitude expressed was a positive or a negative one. At the same time each story was placed in one of the five categories most representative of the attitude expressed in the story. The criteria presented in Appendix V

served as a guide for scoring of the stories.

When all sixty records had been analyzed and scored by the experimenters, the sequential analyses of the sixty protocols were typed on the work sheets, and along with the original stories and the criteria for scoring, submitted to two other psychologists for independent scoring. Since all the records were shuffled and all identifying information removed, the raters possessed no knowledge of which protocols belonged to the offenders and which to the non-offenders. From the thirty matched pairs, one pair was selected at random and scored so that it might serve as an example of the scoring procedure for the two raters. Because of this, it was not included in the statistical analysis of differences between the two groups.

The Picture-Frustration Study was scored according to the samples provided in Rosenzweig's manual (48). In responses deviating seriously from the scoring criteria, and where serious question arose regarding the assignment of a score, a second worker was consulted and a conference decided the final score.

Upon completion of the scoring of the TAT by the two independent raters, inter-judge reliability was to be determined by calculation of the percentage of agreement between the three raters with regard to assignment of plus or minus signs to each story and placement of the stories in the attitude categories. In addition, the Contingency coefficient was used to determine the significance of inter-judge ratings. A chi-square value of 3.84 or above

which is significant at least at the .05 level will reflect an acceptable degree of inter-judge reliability and lend credence to the validity of our conclusions.

According to our first hypothesis, we expect the offenders to give a significantly higher number of negative stories than the non-offenders on the Thematic Apperception Test. Statistically, we are testing the Null hypothesis, i.e. whether the two groups are significantly different from a homogeneous sample. For analysis of the data, the Wilcoxon matched-pairs signed-ranks test has been chosen because the investigation employs two related samples and it yields difference scores which may be ranked in order of absolute magnitude. The level of significance is set at .01. The Null hypothesis is to be rejected in favor of our operational if the observed value of T is such that the probability associated with its occurrence is equal to or less than .01.

Our second problem is concerned with the differences and similarities of the two groups with regard to the negative attitudes on the TAT and the extrapunitive scores on the Picture-Frustration Test. According to our hypothesis, we expect those subjects in the brig group who have a preponderance of negative attitudes on the TAT to have higher extrapunitive percentage scores on the P-F Study; those with a smaller number of negative attitudes on the TAT should show a lower extrapunitive percentage score on the P-F Study. The Sign Test was chosen for analysis of the data because the study uses ordinal measures within matched

pairs and the difference may be appropriately represented by plus and minus signs. A significance level of .01 has been decided upon. Since the direction of the difference is predicted, a one-tailed region of rejection is appropriate. The region of rejection consists of all values of x whose one-tailed associated probability of occurrence under the Null hypothesis is equal to, or less than, .01.

The third aim of the present investigation is to determine the significance of the similarity or difference between the extrapunitive scores of the experimental and the control group on the Rosenzweig Picture-Frustration Study. Our hypothesis states that the brig population will obtain a significantly greater number of E percentage scores than the control population. For analysis of the data, the Wilcoxon matched-pairs signed-ranks test is chosen because the two samples are related and the difference scores could be ranked in order of magnitude. A significance level of .01 is also chosen. Because the direction of the differences is predicted, a one-tailed region of rejection is appropriate. The region of rejection consists of all values of T which are so small that the probability associated with their occurrence is equal to, or less than, .01 for a one-tailed test.

CHAPTER IV

RESULTS OF THE INVESTIGATION

The results of the present investigation are based on the independent and combined evaluations of three psychologists who employed the method of Sequential Analysis and scored the Thematic Apperception Test stories as positive or negative and also assigned the individual stories to one of five categories, namely: attitudes towards others and self; attitudes toward work and success; attitudes toward a problem; attitudes toward external forces; and attitudes toward duties and obligations. Table II below shows the percentage of agreement between judges for the plus-minus evaluations and the category determinations.

TABLE II
PERCENTAGE OF AGREEMENT AMONGST THREE RATERS
IN SCORING 754 TAT STORIES

	AB	AC	BC	ABC
Scoring Story Plus or Minus	82%	80%	80%	70%
Placing Story in Category	64%	47%	51%	36%

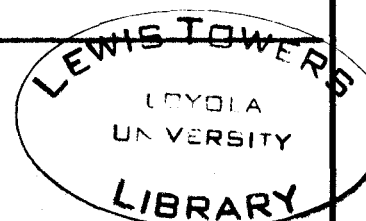
In scoring the stories as positive or negative, rater A and rater B agreed on eighty-two percent or 616 stories; rater A and rater C agreed on eighty percent or 600 stories; raters B and C agreed on 607 or slightly in excess of eighty percent of the stories. All three raters agreed on the same sign for a story in seventy percent of the stories. Any two raters agreed on the same sign on one-hundred percent of the stories.

Agreement amongst raters in placing the stories in one of the five categories was somewhat smaller. Rater A and rater B agreed on sixty-four percent or 482 stories; rater A and rater C agreed on forty-seven percent or 356 stories; raters B and C agreed on fifty-one percent or 383 stories. All three raters agreed on the same category on 271 stories or thirty-six percent of the total. Any two raters agreed on the same category on eighty-nine percent of the stories.

TABLE III

CONTINGENCY COEFFICIENTS FOR THE THREE RATERS
IN SCORING 754 TAT STORIES

	AB	AC	BC
Scoring Story Plus or Minus	.54	.51	.52
Placing Story in Category	.68	.57	.59



Contingency coefficients were calculated to measure the sig-

nificance and extent of the relationship between the ratings of the three judges. Table III above gives the various C coefficients for the three raters.

The upper limit of the Contingency coefficient in a two-way classification table (plus-minus) is .707. The upper limit for C in a five-fold table (our five categories) is .894. While these coefficients fall short of their upper limits, they nevertheless are significant in each instance. All of the chi-square values obtained in the computation of these coefficients were significant well beyond the .01 level. The percent agreement amongst the raters and the Contingency coefficients reflect a moderate degree of reliability in scoring the attitudes within the stories as constructive or non-constructive, and an acceptable degree of reliability in placement of the stories in various attitude categories. This lends support to our method of TAT analysis and its scoring procedures.

Our first problem was concerned with the presence of similarities and differences between the offenders and non-offenders with regard to constructive and non-constructive attitudes on the Thematic Apperception Test. The hypothesis stated that each offender within our matched pairs would give fewer positive attitudes in their TAT stories than non-offenders.

Applying the category criteria which had been established, rater A differentiated all thirty pairs on the basis of positive and negative attitudes. That is, in the thirty matched pairs, the

Naval offender within each pair obtained a lesser number of positive attitudes and a greater number of negative attitudes than the non-offender. Rater B, possessing only a sample of the scoring procedure and description of the categories, assigned a lesser number of positive signs to the offenders but identified them correctly in twenty-four of the twenty-nine pairs. In three of the instances, a greater number of negative signs were assigned to the protocols of the non-offenders, and in two instances, both the offenders and non-offenders obtained an equal number of positive and negative signs. Rater C, with instructions similar to those of rater two, assigned fewer positive signs to the offender in twenty-five of twenty-nine pairs. Thus, all three raters were significantly successful in differentiating the offender from the non-offender on the basis of the presence of constructive or non-constructive attitudes in the TAT stories.

In the final analysis, a composite rating based on the scoring of the three judges was established. This was done to make the rating objective. Actually, raters two and three, who were given only one pair as a sample, were probably not as alert to subtle differences between positive and negative attitudes as was rater one who had worked out the definitions on the basis of ten pairs. Of the three rater signs for each story, the modal sign was taken as the final rating. That is, the sign common to any two of the three raters was taken as the final rating for the particular story. In this manner, twenty-seven out of the group of

twenty-nine offenders obtained fewer positive signs than the non-offenders. In one instance, the non-offender obtained fewer positive scores than his paired offender, while in the other matched pair, both the offender and non-offender obtained an equal number of positive and negative scores.

For this composite rating, the Wilcoxon matched-pairs signed-ranks statistical test yielded a T value of 6.5 which when transformed, resulted in a z score of -4.47. A z as extreme as -4.47 has a one-tailed probability associated with its occurrence under the Null hypothesis of $p=.00003$. Since this is less than .01, and the value of z is in the region of rejection, the Null hypothesis is rejected in favor of our research hypothesis: that the Naval offender possesses significantly fewer positive attitudes on the Thematic Apperception Test than the non-offender, and hence, a significantly greater number of negative attitudes.

Our second problem involved the investigation of similarities and differences between the negative and positive attitudes of the two groups on the Thematic Apperception Test and their extrapunitive percentage scores on the Rosenzweig Picture-Frustration Study. Our hypothesis stated that individuals in either group who possessed the greater number of positive or negative attitudes on the TAT would similarly obtain lower or higher E percentage scores on the P-F Study. As already indicated, twenty-seven offenders possessed a greater number of negative attitudes than their paired non-offenders. In one instance, the non-offender

obtained a greater number of negative attitudes than the offender. In the other instance, both the offender and non-offender scored equally in negative and positive attitudes. This latter case was not included in the calculation of the difference between groups since it was a tie. Out of the total of twenty-eight matched pairs, twenty-one offenders who obtained a greater number of negative attitude scores on the TAT stories, obtained higher extrapunitive percentage scores on the Picture-Frustration Study. Seven offenders who obtained a greater number of negative attitudes on the TAT than their matched pair, obtained lower extrapunitive percentage scores than their corresponding non-offenders.

Using the Sign test for calculation of the significance of differences, a z value of -2.45 was obtained. The significance of a z value of -2.45 , having a one-tailed probability, is $p = .0071$. Since this is less than $.01$ and is in the region of rejection, the Null hypothesis is rejected in favor of our research hypothesis: that those offenders who will obtain a greater number of negative attitudes on the TAT than their matched pair, will obtain higher extrapunitive percentage scores on the Rosenzweig Picture-Frustration Study.

The third phase of our investigation was concerned with the relationship between the extrapunitive percentage scores of the two groups on the Picture-Frustration Study. Our research hypothesis stated that the individual offenders will obtain higher E percentage scores on the Picture-Frustration Study than their

paired non-offenders. Of the thirty matched pairs, twenty-one members of the control population scored lower in E percentage than the brig population; nine scored higher. The brig group obtained a mean E percentage score of 53.1 percent while the control group obtained a mean E percentage score of 35.5.

The Wilcoxon matched pairs signed-ranks test was employed to determine the significance of the difference between groups. A z value of -3.00 was obtained. A z value as extreme as this has a one-tailed probability associated with its occurrence under the Null hypothesis of $p = .0013$. Since this is less than .01 and z is in the region of rejection, our research hypothesis was confirmed.

DISCUSSION

The degree of agreement amongst the judges in scoring the TAT stories suggest that the procedures used in the present investigation and the results obtained are quite reliable. Greater inter-judge agreement was anticipated, but several factors were present which tended to restrict the degree of agreement. Most significant, perhaps, was the individual differences amongst the raters in training and experience with the method of Sequential Analysis. On a number of occasions, disagreement between raters was present because of a rater's tendency to neglect the overall sequence of the stories. This, to a large extent, is a function of training and experience in the use of the method. Since each of the raters varied in the degree of experience they possessed,

they tended to vary in their evaluation of the stories and protocols. As with any technique of TAT analysis, the method used here requires specific training and experience. As this increases greater agreement amongst raters might be expected.

A second factor contributing to inter-judge discrepancies is also a function of training and experience. While the present judges have evaluated a fairly large number of TAT records, the cases and populations with which they had most experience differed radically from the present population. Likewise, the categories employed in the present study were different, as were the definitions of these categories. Some difficulty in shifting from specific criteria for one population which also uses different categories might be expected, unless the raters have had a good deal of extensive experience in Sequential Analysis.

A third factor which limited the degree of inter-judge reliability was the complexity of the categories and the occasionally overlapping criteria defining these categories. In analysis of a story, grasping the essential attitude present is of greatest importance. Scoring of the particular attitude as positive or negative depends on the criteria given, which must be worked out according to the groups to be distinguished (e.g. offenders vs non-offenders). In the present investigation the criteria were very closely defined, yet some overlapping between categories of attitudes was noted by the raters. This was due in part to the manner in which the categories were defined, and in part to the

nature of the specific categories used in this investigation. Analysis of the attitude category scores of the three raters, in the process of calculating the Contingency coefficients, points up this problem. Specifically, the greatest difficulty seemed to exist in determining whether an attitude within the story was an attitude toward a problem or an attitude toward others or oneself. Whenever there was doubt as to how to score a story, the general tendency was to lean in the direction of the problem category. There was some question at the beginning of this investigation with regard to the use of this category pertaining to attitudes toward a problem and it is apparent now that it might well have been excluded because of its inherent difficulties.

The present investigation was primarily concerned with differences in constructive and non-constructive attitudes present in the TAT productions of offenders and non-offenders. While criteria for differentiating positive and negative attitudes pertaining to specific aspects of personality were at issue, we were only secondarily interested in the manner in which our two groups differed with regard to different areas in which these attitudes were expressed. The results, however, do point to differences between groups which are worth noting.

A composite rating based on the scoring of the three raters was established for the category scores. As already stated, all three raters agreed on the same category score on 271 stories or thirty-six percent of the total number. The score common to all

three raters was thus assigned as the composite score. On fifty-three percent of the stories, any two raters agreed on the same category. Here, the category that was assigned by any two raters who agreed on the same score was used as the composite rating. On eighty-two stories, a different category score was assigned by each rater. Of these, forty of the stories belonged to the offender group and forty-two to the non-offender group. Since there was complete disagreement on these stories, they were excluded from the analysis of the distribution of attitude categories for the two groups. In addition, seventy-four stories were not included in the composite analysis because there was lack of agreement between raters on the sign of the category. In other words, two of the three raters agreed on a particular category score but disagreed on the sign for the attitude category. Thirty-eight of these stories belonged to offenders and thirty-six to non-offenders. Thus, in all, 156 stories were dropped from the final analysis, seventy-eight belonging to offenders and seventy-eight to non-offenders. The differences between groups in specific attitude categories is thus based on 598 of the total of 754 stories. Table IV on the following page shows the distribution of the 598 stories throughout the five categories.

Inspection of this table indicates that the differences for the two groups between the positive and negative attitudes in the five categories is obviously significant. In view of this, the following generalizations regarding the differences between our

TABLE IV

DISTRIBUTION OF CATEGORY SCORES FOR OFFENDERS AND
NON-OFFENDERS ON 598 TAT STORIES

	Categories											
	1		2		3		4		5		Total	
	+	-	+	-	+	-	+	-	+	-	+	-
Offenders	13	83	28	34	10	97	3	14	5	13	59	240
Non-offenders	43	20	82	16	53	36	17	10	16	6	211	88

two populations might be drawn.

Category 1: Attitudes toward others and self: Offenders, generally tend to be resentful, distrustful, unfriendly, and suspicious of other people. They have little respect for the feelings of others, are not particularly interested in helpfulness and tend to strike back when angered. They frequently are bored with people, feel lonely, and at the same time would like to escape and live by themselves. They feel they have never been loved, and others are against them. They may be sorry for hurting others and would like to make up but they are unsure of themselves, and are afraid they might not be accepted and forgiven; they reason that it's too late for things to be different anyway.

The non-offenders, on the other hand, are more sensitive to the feelings of others. They are capable of relating to people, tend to be more considerate of their feelings, and on having difficulty with others are able to forgive and forget. They feel proud of others and their accomplishments; are inclined to feel that

others could be relied on and in turn they are willing to work hard to please them. Others may be disturbed by their actions but they are able to resolve the difficulties in a positive way and accept help and encouragement if necessary. At the same time, they are self-accepting and able to look ahead and rely on themselves. Being aware that punishment follows submission to their impulses, they tend to avoid anti-social activity.

Category 2: Attitudes toward work and success: In their attitudes toward work, success, and accomplishment, the offenders see failure despite effort. As a result, they give up easily and feel that success doesn't depend on work but comes about by luck or accident. They generally feel success is not worth working for. When they are forced to do something against their will, they resent it and react in a negativistic manner. They lack interest in work and persist in having their own way. Work is usually disliked except for its material benefits.

The non-offenders recognize that success comes about through one's own efforts and sacrifices. They look forward to accomplishing something, desire to be like others who are successful and tend to profit from their experiences. They may be bored with what they are doing but they do what is expected of them and look ahead to the future, realizing they'll lose out if they will refuse to work. When confused about what they would like to do, they are willing to seek advice and profit from the experiences of other people.

Category 3: Attitudes toward a problem: When faced with a problem, the offenders definitely lack a constructive approach to it. They usually feel hopeless in the face of their difficulties; they feel they must act and do something but are afraid and uncertain about what to do. And so, they worry and frequently propose an irrational solution or try to evade it completely. After experiencing difficulty, they may promise to do better but do not act on it. They expect others to resolve their difficulties, look for a break or a change in external circumstances, or simply dream of a solution to their problem. Frequently, they blame others for their difficulties and so expect them to solve their problems.

The non-offenders perceive their difficulties more clearly. They strive to solve them in a more realistic and rational manner and accept the responsibility for their solution. They may be dissatisfied with things as they are but are able to tolerate and get over them. When dissatisfied, it is momentary and a brighter future lies ahead. Even if disturbed or upset by a problem, they are able to refrain from acting impulsively.

Category 4: Attitudes toward external forces: In their approach to life, the offenders are pessimistic, helpless, and discouraged. They are inclined to blame external circumstances for their difficulties and feel that obstacles in their path are insurmountable, and so they lack initiative in attempting a solution. Life is miserable, a dream, and things are unpredictable.

It is full of strange things and one may easily get hurt. There is little use in trying to do better. If one expects too much, he may be shocked. Many times, being dead is better than being alive.

The non-offenders are more optimistic, hopeful, and accepting in facing life. There is danger from the external environment but they come through alright. Misfortune could happen but they are not afraid. They are prepared to fight and use their head. If they can't take care of themselves, others will help them.

Category 5: Attitudes toward duties and obligations: In handling his responsibilities, the offender is inclined to neglect them. He feels that if something is not pleasant for him, he should not do it. He tends to disregard the wishes of others and feels it is alright to evade one's responsibilities and do things a little differently. On doing something wrong, one could play it smart and get away with it. He will engage in anti-social activity without seeing punishment as a deterrent.

The non-offender recognizes his responsibilities and attempts to meet them. If he does something imprudent and recognizes his error, he tries not to do it again. He realizes that if he rebels against his superiors or otherwise does wrong, he will be punished. He is inclined to feel guilty and remorseful about his unacceptable activity and tries to make amends or do right in the future. If he lets others down by his actions, he tries to be more careful

in the future. He figures it doesn't pay to escape his responsibilities.

These differences between our two populations are tentative generalizations stemming from the choice of the attitude categories used for this investigation. Some question might be raised regarding the selection of our five categories and the distribution of scores in these five categories. Inspection of Table IV shows that categories 1, 2, and 3 are all heavily loaded with scorings, while categories 4 and 5 combined received only a small proportion of the scores (fourteen percent). Any of several reasons may be responsible for this distribution. For one, the selection of TAT cards seemed to have some bearing on the distribution. Cards 3, 4, 5, and 7 were most heavily scored with regard to attitudes toward self and others; cards 1, 2, 9, and 17 were scored most heavily for attitudes toward work and success; cards 3 through 20 were all heavily loaded with scorings for attitudes toward a problem. Only card 11 seemed to possess some tendency to evoke responses dealing with attitudes toward uncontrollable external forces, and card 13 attitudes toward duties and obligations. Once again, it would appear that the problem category is an excessively encompassing one and not only leads to conflict with regard to determination of a particular category score, but also leads to an excessively inequitable and unbalanced distribution of all scores.

Secondly, categories 4 and 5, as defined in this investiga-

tion, seem to be too restrictive, perhaps because of their close relationship to categories 1 and 2. In all, the distribution of scores would appear to suggest that categories 3, 4, and 5 might be excluded or redefined in any future research. While the uneven distribution of scores does not have serious bearing on our present results, since the differences between positive and negative attitudes for the two groups are highly significant and would likely be so in spite of the objections raised, a more equitable distribution based on less overlapping and more clearly delineated categories would be more desirable and serve to define more specifically the attitude differences between groups and at the same time facilitate the scoring for independent raters.

In examining the distribution of plus and minus scores for our two groups on the thirteen cards, some interesting relationships are evident. The distribution of the plus-minus scores as derived from the judgments of the rater who possessed the most extensive experience with the method of Sequential Analysis, is presented in Table V on the following page.

A glance at the table shows the differences between plus and minus scores for the two groups on the thirteen cards. The differences are clearly apparent on cards 1 through 9. The offenders predominate with negative attitudes while the non-offenders show a significantly greater number of positive attitudes. However, on card 11, the differences begin to break down somewhat as the non-offenders jump significantly in the presentation of negative

TABLE V

DISTRIBUTION OF PLUS-MINUS SCORES FOR THIRTY MATCHED
PAIRS ON THE THIRTEEN TAT CARDS

	Sign	1	2	3	4	6	7	8	11	13	14	16	17	20
Offenders	+	2	8	4	3	4	4	6	3	1	7	7	7	5
	-	28	22	26	27	26	26	24	27	29	23	23	23	25
Non-offenders	-	9	5	9	5	7	4	6	14	17	14	6	4	12
	+	21	25	21	25	23	26	24	16	13	16	24	26	18

attitudes. This minimized difference is further diminished on cards 13 and 14, after which there is a sharp drop in the presence of negative attitudes for the non-offenders until the final card, 20, when once again there is a noticeable increase in negative attitudes for them.

The trends evident in this patterned distribution of positive and negative attitudes reflect certain instabilities present amongst Naval personnel in general. At the present time, this to a large extent would seem to be a function of their present life situation. Enlistees in the Navy, for the most part, are seventeen, eighteen, and nineteen years of age, unmarried, and unsettled with regard to the future. Many enter service because of their obligated duty, while others are seeking vocational training which will equip them for skilled employment upon discharge. In the course of their service, they carry out their responsibil-

ities but along with this, they function within their capabilities, find it difficult to pursue their own interests, don't know what to do with themselves when not engaged in carrying out their duties which frequently are limited, and generally feel restless, restrained, and bored unless they are preparing for or are in a combat status. They are uncertain about the future and frequently unable to plan it constructively unless discharge is in the near future (cards 11, 14, 20). Hence, while bored and restrained, and away from home, they seek freedom and spontaneity during their hours of "liberty". This pattern of feeling and behavior is constantly repeated, resulting in a typical attitude of reduced morality (card 13), personal dissatisfaction, and uncertainty in what lies ahead. Not only does this sequence on the TAT stories reveal these attitudes and behavioral characteristics but it is readily apparent in the verbal comments and physical behavior of the average enlisted man.

In the analysis of the similarities and differences between negative and positive attitudes on the TAT and the extrapunitive percentage scores on the P-F Study, we found that the twenty-one offenders within our twenty-eight matched pairs who obtained a greater number of negative attitudes on the TAT also obtained higher E percentage scores on the P-F Study than their paired non-offenders. The significant degree of agreement between the two tests suggests that there are inherent similarities between them in so far as externally directed aggressive activity is

concerned. Negative attitudes on the TAT, in whatever form, are related to overt aggression, as are the E percentage scores on the P-F Study. While our hypothesis has been confirmed, the results are only pertinent to our populations. Several factors make it difficult to generalize beyond this. It must be remembered that our offender group was a relatively mild one as far as aggressive activity is involved. Certainly, repeated Absence With-Out Leave, with complete disregard of regulations involves aggressiveness, however, this is of a limited sort and would appear to include personal characteristics which would be different from those present in a group of seriously aggressive offenders. What the similarities or differences between the two tests would be if more serious forms of aggression were included in our offender population is not possible to say. Secondly, the results are only pertinent to our two related populations since both function within a limited social structure with restraints and regulations different from a civilian population. Thirdly, our results are derived from two clear cut Naval populations taken from the extremes of a continuum, offenders at one end and non-offenders at the other. How our results would be affected if some of the non-offenders had a history of delinquency and some of the offenders did not, is not known. In spite of the limitations surrounding our evidence, the results nevertheless, are meaningful. The consistency between the two tests would indicate that the P-F Study might be validly employed with caution in the evaluation of offenders. The evidence

would further indicate that more extensive research might lead to similarly fruitful results which would increase its value and usefulness.

In the review of the literature, two investigations were noted wherein a lack of agreement was found between the analysis of aggression in the TAT stories and productions on the Picture-Frustration Study. This lack of agreement might be due to the differences between the type and number of cards used in the cited investigations, in contrast to the present one, or it might be due to the manner in which aggression was scored in the TAT stories. The evidence against scoring aggression in TAT stories as an isolated variable which is simply added to other similar manifestations in the stories, without considering the outcome of the story, is overwhelming. The findings of the present study along with that of Mussen and Naylor suggest that consideration of the outcome of a story has a direct bearing on the expression of aggression and hence influences the final results of an investigation.

In the third phase of our study, we were concerned with the relationship between the E percentage scores of our two groups on the P-F Study. We expected the offenders within our matched pairs to score higher in E percentage than the non-offenders. This proved right in twenty-one of the thirty matched pairs. Hence, statistically, our research hypothesis was confirmed. We further examined the data from another standpoint. The sixty E percentage scores were divided into two groups after arbitrarily selecting a

cutt-off point of fifty percent. Those scores exceeding fifty percent E were placed in one group and those with less than fifty percent E in a second group. There were eighteen scores exceeding the fifty percent cut-off point and forty-two falling below it. Of the eighteen cases with extrapunitive scores higher than fifty percent, fourteen belonged to offenders and four to non-offenders. Of the forty-two cases with E percentage scores below fifty percent, sixteen belonged to offenders and twenty-six to non-offenders. These differences yielded a chi-square value of 6.43 which is significant at the .01 level.

The significance of our overall results points to the validity of the instrument in assessing externally directed aggression with select Naval populations. The objections raised above can also be cited here. Since the middle range of the population continuum was not included in the present study, definite conclusions regarding its validity cannot be reached. The results simply point to its possible usefulness as a screening aid in consideration of the degree of aggression in Naval offenders, and its usefulness in further research.

CHAPTER V

SUMMARY AND CONCLUSIONS

The primary purpose of the present investigation was to employ a relatively new method of Thematic Test analysis in the determination of attitude differences between two groups of Naval enlisted men who were matched and equated for age, intelligence, race, and length of service. One group consisted of thirty offenders who possessed a delinquent history before enlistment and were presently confined in the Naval brig for repeated aggressive activity; the other group consisted of thirty enlisted men who were never subjected to disciplinary action while in service and were never involved officially in delinquency before enlistment. Our investigation employed thirteen cards of the Thematic Apperception Test (1, 2, 3, 4, 6, 7, 9, 11, 13, 14, 16, 17, 20) and the Rosenzweig Picture-Frustration Study. The two instruments were administered to the two groups according to standard procedures and instructions with the following hypotheses in mind: (1) each offender within our matched pairs would give fewer positive attitudes and more negative attitudes in their TAT stories than the non-offenders; (2) individuals in either group who possessed the greater number of negative attitudes on the TAT would

obtain higher extrapunitive percentage scores on the Picture-Frustration Study; (3) the individual offenders would obtain higher extrapunitive percentage scores on the P-F Study than their paired non-offenders.

The Thematic Apperception Test was analyzed according to Arnold's method of Sequential Analysis and the individual stories scored as positive-constructive or negative-nonconstructive and placed in one of five attitude categories: (1) attitudes toward others and self; (2) attitudes toward work, success, etc.; (3) attitudes toward a problem; (4) attitudes toward uncontrollable external forces; (5) attitudes toward duties and obligations. Three raters independently scored the individual protocols and stories. The Rosenzweig Picture-Frustration Study was scored for extrapunitiveness or externally directed aggression according to Rosenzweig's samples and instructions.

The following results were obtained: the first hypothesis which stated that offenders would give more negative and less positive attitudes in their TAT stories than the non-offenders was confirmed at the .00003 level of confidence.

The second hypothesis stated that individuals in either group who possessed the greater number of negative attitudes on the TAT would receive higher extrapunitive percentage scores on the P-F Study. This was supported at the .0071 level of confidence.

The third hypothesis stated that individual offenders would obtain higher extrapunitive percentage scores on the P-F Study

than their paired non-offenders. This was supported at the .0013 level of confidence.

The above results, i.e., hypothesis one and two, were based on the composite ratings of three judges who independently scored the TAT stories. Inter-judge reliability as determined by the percentage of agreement between raters and Contingency coefficient values were considered significant.

The obtained positive results in contrast to the questionable and frequently negative findings of related research cited in the literature demonstrate the effectiveness of the method of Sequential Analysis and its basic assumptions. The extent of agreement between the results of the Thematic Apperception Test and the Rosenzweig Picture-Frustration Study seems to support the claims of validity for the P-F Study as a projective instrument and suggests its possible usefulness in further research. Differences between the two groups as derived from the category scores were discussed and modifications of the categories for further research were suggested.

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APPENDIX I

TABLE I

DISTRIBUTION OF THE DATA FOR THE CRITERIA ON WHICH THE BRIG
(I) AND CONTROL (II) GROUPS WERE EQUATED

Matched Pairs	Age		GCT		Race		Months Service		Home		School	
	I	II	I	II	I	II	I	II	I	II	I	II
1	18	18	53	53	W	W	8	7	C	C	10	10
2	17	17	54	50	W	W	7	6	T	T	9	9
3	17	17	55	57	W	W	4	4	T	T	10	10
4	17	17	51	50	W	W	7	5	T	T	8	8
5	19	19	54	56	W	W	8	7	T	T	12	12
6	18	18	63	62	W	W	7	8	T	T	12	12
7	20	20	46	48	W	W	23	28	T	T	11	11
8	18	18	58	55	W	W	10	11	T	T	12	12
9	19	19	60	64	W	W	21	27	T	T	11	11
10	18	18	55	56	W	W	19	13	T	T	9	9
11	19	19	47	44	W	W	29	26	T	T	9	9
12	19	19	61	62	W	W	12	11	T	T	12	12
13	18	18	50	51	W	W	9	7	C	C	12	12
14	30	30	44	48	W	W	152	158	T	C	12	12
15	23	23	60	61	W	W	66	57	T	C	12	12
16	18	18	57	57	W	W	8	10	C	T	12	12
17	19	19	48	47	W	W	26	23	T	T	10	10
18	19	19	60	59	W	W	16	61	C	C	10	10
19	22	22	42	43	W	W	29	28	C	T	10	10
20	17	17	46	46	W	W	8	3	T	T	10	10
21	17	17	60	62	W	W	6	4	C	T	8	12
22	20	20	51	58	W	W	4	7	C	T	10	12
23	20	20	50	57	W	W	12	8	C	T	10	12
24	18	18	48	47	W	W	3	4	C	T	8	12
25	19	19	54	52	W	W	5	6	T	T	10	12
26	19	19	59	57	W	W	4	4	C	T	8	12
27	17	17	51	58	W	W	5	4	C	T	10	9
28	18	18	55	58	W	W	5	8	C	T	9	12
29	20	20	57	56	W	W	12	12	C	T	10	12
30	20	20	56	52	W	W	21	14	T	C	8	8
Mean	19	19	53	54			18	19			10	10

APPENDIX II

TABLE FOR THE CONVERSION OF G.C.T. SCORES TO APPROXIMATE
WECHSLER-BELLEVUE I. Q. VALUES

GCT	I.Q.	GCT	I.Q.	GCT	I.Q.	GCT	I.Q.
20	55.0	36	79.0	52	103.0	68	127.0
21	56.5	37	80.5	53	104.5	69	128.5
22	58.0	38	82.0	54	106.0	70	130.0
23	59.5	39	83.5	55	107.5	71	131.5
24	61.0	40	85.0	56	109.0	72	133.0
25	62.5	41	86.5	57	110.5	73	134.5
26	64.0	42	88.0	58	112.0	74	136.0
27	65.5	43	89.5	59	113.5	75	137.5
28	67.0	44	91.0	60	115.0	76	139.0
29	68.5	45	92.5	61	116.5	77	140.5
30	70.0	46	94.0	62	118.0		
31	71.5	47	95.5	63	119.5		
32	73.0	48	97.0	64	121.0		
33	74.5	49	98.5	65	122.5		
34	76.0	50	100.0	66	124.0		
35	77.5	51	101.5	67	125.5		

APPENDIX III

DESCRIPTION OF THE THIRTEEN THEMATIC APPERCEPTION TEST CARDS USED IN THE EXPERIMENT

1. A young boy is contemplating a violin which rests on a table in front of him.
2. Country scene: in the foreground is a young woman with books in her hand; in the background a man is working in the fields and an older woman is looking on.
3. On the floor against a couch is the huddled form of a boy with his head bowed on his right arm. Beside him on the floor is a revolver.
4. A woman is clutching the shoulders of a man whose face and body are averted as if he were trying to pull away from her.
6. A short elderly woman stands with her back turned to a tall young man. The latter is looking downward with a perplexed expression.
7. A gray-haired man is looking at a younger man who is sullenly staring into space.
9. Four men in overalls are lying on the grass taking it easy.
11. A road skirting a deep chasm between high cliffs. On the road in the distance are obscure figures. Protruding from the rocky wall on one side is the long head and neck of a dragon.
13. A young man is standing with downcast head buried in his arm. Behind him is the figure of a woman lying in bed.
14. The silhouette of a man (or woman) against a bright window. The rest of the picture is totally black.
16. Blank card.
17. A naked man is clinging to a rope. He is in the act of climbing up or down.

20. The dimly illumined figure of a man (or woman) in the dead of night leaning against a lamp post.

APPENDIX IV

DESCRIPTION OF THE TWENTY-FOUR PICTURES OF THE PICTURE-FRUSTRATION STUDY

1. The driver of an automobile is apologizing to a pedestrian for having splashed the latter's clothing.
2. A hostess is expressing consternation at a guest's having broken a favorite vase.
3. A girl is remarking that her companion, seated in a theatre behind a woman with a large hat, cannot see a thing.
4. A man who has driven his friend to the railroad station is apologizing because the breakdown of his car led to missing the train.
5. A customer is complaining to a clerk that she has brought back a new watch three times now because it refused to go.
6. A library attendant is explaining to a girl carrying four books that the rules permit only two books to be taken at a time.
7. A waiter is accusing a customer of being too fussy.
8. A young man is explaining to a companion that the latter's girl friend has invited him to a dance.
9. While it is raining a clerk in a pawn shop is refusing a customer his umbrella until the manager arrives in the afternoon.
10. A man is accusing another of being a liar.
11. A party in a telephone booth at 2:00 A.M. is apologizing for a wrong number to a person who has apparently just been awakened by the call.
12. A man is pointing out to another that the latter's hat has been taken by someone else who has left his own instead.

13. A man at his desk is stating that he cannot keep a previously arranged appointment with a caller just arriving.
14. A woman standing on a windy street is remarking to a companion that someone for whom they are waiting should have been there ten minutes ago.
15. A woman is apologizing to her partner in a card game for having made a stupid play.
16. At the scene of an automobile accident one man is accusing another of having had no right to try passing.
17. A woman standing with a man beside an automobile is reprimanding him for having lost the keys.
18. A clerk in a store is apologizing to a customer for having just sold the last of some item.
19. A motorcycle policeman is accosting an automobilist for passing a school house at sixty miles an hour.
20. A girl is musing aloud to her friend as to why they were not invited to a party in an adjoining room.
21. A woman upbraids two others for saying mean things about someone who was in an accident the day before and is now in the hospital.
22. A man who has fallen down is being asked whether he is hurt.
23. A woman dressed for travel has interrupted a telephone conversation to explain to a man surrounded by luggage that a relative wants them to wait till she arrives and bestows her blessing again.
24. A man returning a torn newspaper explains apologetically that the baby caused the damage.

APPENDIX V

INSTRUCTIONS AND CRITERIA FOR SCORING OF THE TAT STORIES

INSTRUCTIONS

Carefully read the descriptions and criteria for the five categories which deal with:

- (1) Attitudes toward others and self
- (2) Attitudes toward work and success
- (3) Attitudes toward a problem
- (4) Attitudes toward uncontrollable external forces
- (5) Attitudes toward duties and obligations

Note particularly their meaning and familiarize yourself with the positive and negative criteria of each category. Proceed then to the sequential analysis of the individual TAT protocols. As you read each story of the protocol, place it in one of the five categories which most accurately describes the subject's attitude. Write the number of the category in the square alongside the story. As you place each story in a category, decide on the basis of the given criteria, whether the basic attitude present is a positive or negative one. If positive, place a plus sign in the square alongside that which denotes the number of the category; if negative, place a minus sign there. Score all sixty protocols in this manner.

It is important to get at the basic attitude reflected in the sequential analysis of the stories. Refer to the original stories if necessary, and make frequent use of the criteria presented for each category.

Category 1: Attitudes Toward Others and Self

Does the meaning of the story as revealed in the sequential analysis primarily reflect the subject's attitude toward others or himself? If so, is it essentially a positive, adjusted, constructive attitude towards others or self, or is it a negative, hostile, disparaging, non-constructive attitude? If the sequential analysis reveals primarily how he relates to other people or himself, the story is classified as positive or negative, according to the following criteria:

Positive (Plus) Attitudes Toward Others and Self

Generally, he relates well to people; he is helpful, considerate and understanding of others; after having difficulty he is able to forgive and forget; shows recognition of others feelings on hurting them; appreciates what others have done for him; feels others could be relied on; feels proud of others and their accomplishments; works hard for others and demands their loyalty; others may be disturbed by his actions but he still accepts them; realizes that he will be forgiven by others on admitting the truth; has confidence in himself and others; when blamed by them is able to resolve his difficulty in a positive way; accepts encouragement; if led into difficulty is able to rely on himself; is self-accepting and looks ahead; accepts himself through his accomplishments; recognizes that punishment follows argument, violence, commission of a crime; recognizes that punishment follows submission to anti-social inclinations or catering to the inclinations of others.

Negative (Minus) Attitudes Toward Others and Self

Disparaging, resentful, distrustful of others; when aggravated, hurts others purposefully; unfriendly; feels if he doesn't hurt others they will get him; is argumentative, offensive; makes others unhappy by his actions; dislikes others for being helpful; when angered, strikes back; is tempted to evil and revenge; feels justified in his actions while others think differently; when wronged, he takes revenge but is sorry later; is irritated when talked to about his behavior; tires of people; it's not his fault if people are hurt; others suffer for his actions; wants to get away, live alone, escape; feels alone, rejected, unloved; feels he has never received love and cares for no one; others are against him; argues with others and then makes up; is sorry for hurting people but feels it is too late; plans to confess his mistakes but never does; feels ashamed after arguing; on hurting someone, is not sure he'll be forgiven; upsets others by his actions and then gives in to them.

Category 2: Attitudes Toward Work and Success

If the story as seen in sequential analysis is essentially concerned with achievement, success, work, accomplishment and ambition, it should be placed in this category. Further, it should be classified as positive or negative according to the following criteria:

Positive (Plus) Attitudes Toward Work and Success

Success comes through one's own effort and sacrifices; a sincere interest in work and achievement is shown; there is tenacity and perseverance despite failure; learns from failure of others; desires to do or be like others but becomes otherwise successful; simply works at something; it is nice to rest after completing work; work is followed by success; looks forward to work in the future; is willing to work and with assistance attains success; is undecided about accomplishing something but does it anyway; even though bored he does what he is supposed to do; envies others and looks ahead to the future; works even though distracted by other thoughts; recognizes that he'll lose out if he doesn't do what is expected; feels capable of doing what is expected; overcomes his handicaps and attains success; feels that one should try but then be satisfied with his outcome in life; is confused about the future, seeks advice and profits from his experiences and failures; desires to be like others and accomplishes his goal; works to help others instead of doing the expected; recognizes that if one has high aspirations success will follow; he may be tired but feels whatever he does isn't hard.

Negative (Minus) Attitudes Toward Work and Success

Failure despite effort; just gives up, doesn't try; quits in disgust; feels success comes by luck or accident, or through external circumstances; success is not worth working for; just day dreams of success; success is attained after little effort; when forced to do something, he accomplishes great things; in doing what he wants, he accidentally becomes highly successful; when forced to do something, he is disappointed and confused; dislikes work except for the money he gets; does what is expected of him but lacks interest and his mind is far away; is indecisive about what he should do; when forced to do something, he is disappointed and wants his own way; after achieving success, he feels pleased and conceited.

Category 3: Attitudes Toward a Problem

The sequential analysis of the stories generally indicates that the subject possesses a problem, how he intends to handle it and what are the possible solutions. His attitude toward the problem is scored as positive or negative according to the following criteria:

Positive (Plus) Attitudes Toward a Problem

Rational recognition and analysis of a problem; obstacles are overcome; strives to solve his problem in a realistic and rational manner; in realistically unjust and hopeless situations he may resort to violence; shows a tolerance of the stress and worry connected with the problem; asks for help from legitimate sources (parents, teachers, God, etc.); accepts reasonable responsibility for the problem and its solution; acts out violently but then accepts punishment willingly; temporarily is dissatisfied with things as they are but quickly gets over it; disregards the desires of others and pursues his own interests after which he realizes his mistake and is sorry; acts cautiously because of the feelings of others; is dissatisfied at the moment but sees a brighter future; after having difficulty, feels that others still care for him; feels capable of making his own decisions; may become disturbed or upset by a problem but refrains from acting impulsively.

Negative (Minus) Attitudes Toward a Problem

The problem is overwhelming and there is no solution, or he proposes an irrational or fantastic solution; doesn't want to face his problem; all is fear and worry; just wants to forget his problem; remorse, guilt, with the feeling of hopelessness in the face of his difficulties; it's all a bad dream; tries to escape from his problem; feels he must act but doesn't; is afraid and uncertain about his actions; after difficulty simply promises never to do it again; promises to keep trying; acts out of a fear of exposure; realizes what he should do but doesn't act on it; resolves his difficulties by getting a break; others force him to act on his difficulties; others solve his difficulties; changes in circumstances or conditions relieve him of his difficulties; feels confused as to what he should do; is unable to rest and feels uncomfortable about something; is optimistic about the future but engages in no action; is tearful; blames others for his problems; dreams of a solution to his difficulties; accidents, good fortune, luck solve his difficulties; resolution of his difficulties are dependent on the actions, help of others.

Category 4: Attitudes Toward External Forces

The essence of the story is the influence of external forces in his life, such as fate, calamities, disappointments, etc. Such stories at times indicate his basic philosophy or attitude toward life. If the sequential analysis of the stories is concerned primarily with such attitudes, place them in this category and score as positive or negative, using the following criteria as a guide:

Positive (Plus) Attitudes Toward Uncontrollable Forces

Optimistic, hopeful in the face of these forces; a healthful acceptance of the inevitable without being overwhelmed by it; there is danger from external forces or objects but one comes through unhurt; one is aware of danger but everything turns out alright; he is prepared in the face of danger; if one is weak others will care for him; one might be strong but still fearful; misfortune could happen but he is not afraid; if one doesn't use his head, things about him will give him trouble; one must be strong to survive; the only means of staying alive is to fight.

Negative (Minus) Attitudes Toward Uncontrollable Forces

Pessimistic, cruel, inevitable fate; blames these external forces for all his difficulties; no use in trying; morbid fear of death, the elements, etc.; resignation to the inevitable, often using it to excuse his own weakness and lack of trying; life is guided solely by fate; life is miserable, unreal, a dream, a jungle; one might be happy and in good spirits one day and crying the next because of what might happen; if one expects the usual routine in life, he might be shocked by the unexpected; life is full of strange things and in going about one gets hurt; this is a stupid world; being dead is better than being alive.

APPENDIX VI

WORK SHEET FOR ANALYSIS AND SCORING OF THE TAT

Name _____ Rater _____

[illegible]

APPROVAL SHEET

The dissertation submitted by Francis Bernard Petrauskas has been read and approved by five members of the Department of Psychology.

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the dissertation is now given final approval with reference to content, form, and mechanical accuracy.

The dissertation is therefore accepted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy

April 10, 1959
Date

Margaret B. Arnold
Signature of Adviser (PK)