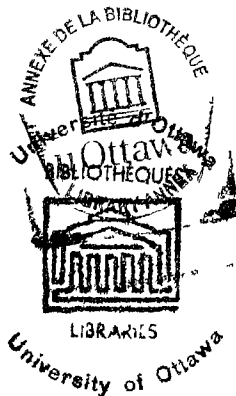


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A COMPARISON OF THREE METHODS OF NEED ASSESSMENT
WITH NORMAL AND NEUROTIC SUBJECTS

by Hugh H. Carberry

Thesis presented to the School of
Psychology and Education of the
University of Ottawa as partial
fulfillment of the requirements
for the degree of Doctor of
Philosophy



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CURRICULUM STUDIORUM

Hugh Henry Carberry was born June 14, 1932, in Philadelphia, Pennsylvania. He received the Bachelor of Science degree in Psychology from Saint Joseph's College, Philadelphia, Pennsylvania, in 1958. He received the Master of Arts degree in Clinical Psychology from the University of Detroit, Detroit Michigan, in 1960. The title of his thesis was An Investigation of the Relationship Existing Between Self-Esteem and Adjustment.

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INTRODUCTION

This investigation lies within the broad area of personality assessment, an area in which the psychologist is faced with many crucial, yet far from completely understood problems. It is a crucial area because effective personality assessment is one of the basic links between existing theories of personality and actual human behavior. Theory, in itself, devoid of empirical validation is of little value to the psychologist unless it propogates research aimed at verification and eventual application. The need for research in the area of personality assessment is particularly pressing for those interested in the problem of efficient and accurate psychodiagnosis.

One problem in the area of personality assessment involves the intervalidation between direct, indirect and projective methods of personality assessment. Gordon Allport's position regarding the differences between normal and neurotic subjects in their response to direct and projective methods of assessment can serve as a theoretical springboard for an investigation of the intervalidation problem.

The focal point and theoretical justification for the present study derives from Gordon Allport's contention that the normal individual, at least when contrasted with the neurotic individual, will give essentially the same

information concerning his motives on direct methods of assessment as he will on projective methods. The neurotic individual, on the other hand, who is typically more defensive and restricted in awareness of his motives will differ in response to the direct and projective method of assessment. This idea has important theoretical and psychodiagnostic implications, and has served as the stimulation for the present investigation.

Specifically, the present study was directed towards an investigation of the degree of congruence existing between the expressed needs of normal and neurotic adults as derived from direct, indirect and projective measures of need assessment with respect to Gordon Allport's theoretical position. The report of the research is divided into three chapters.

The first chapter begins with a discussion of the two major approaches to personality assessment, proceeds to the related problem of classification of assessment techniques and then critically reviews the research which has attempted to test Allport's position. This review leads to the statement of the general research hypothesis of this investigation.

In the second chapter the experimental design is presented. This discussion includes the formulation of the statistical hypotheses, a description of and the rationale behind the instruments used to measure the ten needs, the

sampling and testing procedures and an outline of the statistical techniques.

The research findings relevant to the five major hypotheses are presented and discussed in the third chapter. This chapter is followed by a summary of these findings, and the conclusions.

CHAPTER I

REVIEW OF THE LITERATURE

This chapter attempts to trace the evolution of the research hypothesis of the present investigation. For purposes of clarity, this evolution may be seen in three subdivisions. First, an attempt will be made to place the problem in its broad historical perspective, stressing the two major approaches to personality assessment that seem to have developed. This leads to the second subdivision where the thorny problem of taxonomy of assessment methods will be discussed in view of the present problem. Finally, an exposition of Gordon Allport's theoretical position concerning direct and projective methods of assessment with normal and neurotic adults will be discussed, as well as the specific studies which lend evidence for and against his position. The chapter concludes with a summary and statement of the basic research hypothesis.

1. Two Major Approaches to Personality Assessment.

In the area of personality assessment there seems to be two major approaches which can be detected in the many investigations of human motivation. The first approach involves the direct, straightforward evaluation of behavior as observed through external appraisal and the individual's

introspective reports. In this approach the individual is viewed as a rationally functioning organism who behaves as a result of consciously focussed motivational energy. The individual is considered capable of self-comprehension. When he loses this awareness of motivation and acts on the basis of misdirected, unknown motivation, he is often considered abnormal. In this view, normal and abnormal behavior are seen as separate psychological phenomena, each having distinct functional patterns, awareness of motivation being an essential distinction.

The second approach to personality was stimulated by the psychoanalytic school of psychological thought. This view underemphasized the rational and conscious aspects of the individual. Their emphasis on unconscious instinctual motivation and the deterministic influence of early childhood experiences upon the adult personality allowed little self-understanding for even the mature healthy individual. Man, at best, is seen as largely irrational and incapable of self-comprehension. According to the psychoanalytic rules of psychodynamics, personality assessment cannot be successfully accomplished by merely investigating the individual's self-report. The unconscious motivational system, which underlies all overt behavior and directs personality dynamics, must be revealed in order to achieve real understanding.

The influence of this approach on psychology was paralleled in the field of personality assessment by the introduction of the projective methods. Originally based on the psychoanalytic mechanism of projection, these assessment methods were designed to elicit information which has been defensively repressed into unconsciousness by the individual. By presenting an unstructured, ambiguous stimulus to the subject for interpretation it is hoped that responses reflecting unique personality make-up will be yielded.

This century has seen an unprecedented expansion in the use and development of projective methods of personality assessment. Gordon Allport¹ suggests that the reason for this expansion can be found in the history of motivation theory, a history in which all tendencies seem to be in the singular direction of emphasizing the unconscious.

Allport² sees the philosophical roots of this movement in the writings of Schopenhauer, Darwin, McDougall, Bergson and, more recently and perhaps most importantly, in the psychoanalytic theory of Sigmund Freud. The influence of these positions naturally led to an increased interest in instruments which seemed sensitive to unconscious motives and conflicts.

1 Gordon Allport, "The Trend in Motivational Theory", in the Journal of Orthopsychiatry, Vol. 23, No. 1, January 1953, p. 107-119.

2 Ibid., p. 107.

It was in the face of these trends, says Allport,³ that projective techniques became enormously popular, while techniques of self-report, including the interview and the questionnaire, waned in their popularity.

As a result of the influence of these two approaches to personality assessment, a severe dichotomy has arisen with the subsequent problem of intervalidation between projective and direct assessment measures. Comparisons of direct and projective methods have revealed frequent contradictions and, as a result, there has been a tendency to regard these two approaches as separate entities, each measuring a different aspect or level of personality. This dichotomization has undoubtedly halted progress toward a unified approach to personality assessment. This issue is partially confounded by the problem of taxonomy.

2. The Taxonomic Problem.

While the general historical approaches to the assessment of human behavior can be readily seen, the multitude of psychological assessment methods available to the present day psychologist has introduced the problem of overlap and the consequent need for classification. Although the present investigation stems directly from Allport's theoretical

³ Allport, Op. Cit., p. 107.

position concerning direct and projective methods of personality assessment, his classification of assessment methods follows the general historical trend noted and does not yield the clarity needed. Allport,⁴ in his most recent book, offers a practical grouping of all assessment methods in psychology under eleven headings, following no single principle of organization. He does not take a definitive stand as to what differentiates direct methods from projective methods.

Although his grouping has a certain value in that it does seem to reflect in a general manner the present situation in personality assessment, it is felt that the present taxonomic confusion in the field warrants a special exposition.

Part of the taxonomic confusion stems from the selection of logical principles that could be used to order assessment methods now in use. There are many principles which could be used as the basis for selection; the fact that different authors select different principles leaves one at times perplexed as to what a projective and a direct method of assessment is. Allport⁵ suggests that methods could be classified in accordance with: (1) the theories underlying the invention of the instrument; (2) the regions of personality explored; (3) the type of stimulus presented to the

⁴ Gordon Allport, Pattern and Growth in Personality, New York, Holt, Rinehart & Winston, 1961, p. 396.

⁵ Ibid., p. 396-397.

subject; (4) the type of response required by the subject; (5) the conditions under which the method is administered; (6) the principle of construction of the instrument; and (7) the manner of interpretation. This list, of course, is not exhaustive and other principles of classification have been suggested by other psychologists.

There seems little doubt that some emphasis upon classification is important in every branch of psychology. A classification that can be agreed upon and that seems to make psychological sense should serve a function in research and applied settings. Since the classification of methods of personality assessment is germane to the present study, a brief discussion of some of the major classificatory schemas in the literature will now be presented.

In a discussion of the indirect measurement of social attitudes, Campbell⁶ in 1950 suggested three classificatory principles for assessment methods. First, there is the question of whether the device is disguised or not, that is, whether the subject can estimate accurately the intent of the examiner. Second is the question of whether the instrument is structured or not. Campbell uses the term structure to refer to both the ambiguity of the stimulus and the

⁶ Donald T. Campbell, "The Indirect Assessment of Social Attitudes", in the Psychological Bulletin, Vol. 47, No. 1, January 1950, p. 15-38.

amount of freedom permitted the subject in determining how he will respond. Third is the distinction between self-description as opposed to diagnosis based upon differential performance on an objective task.

In 1957 Campbell⁷ presented a revision of this analysis. His new classificatory approach included three polar dimensions: voluntary versus objective, indirect versus direct, and free response versus structured response.

Campbell's three dichotomies generate eight test types. Five of these types contain tests commonly regarded as projectives and only two are unrelated to personality measurement.

In Campbell's "voluntary versus objective" dimension the point of distinction lies in the subject's set toward the task. In voluntary tests the respondent is given to understand that any answer is acceptable and that there is no external criterion of correctness against which his answers will be evaluated. He is encouraged in idiosyncrasy and self-description. The Rorschach and Thematic Apperception Test are samples of assessment methods which would fulfill the requirements of the "voluntary" criterion.

⁷ Donald T. Campbell, "A Typology of Tests, Projective and Otherwise", in the Journal of Consulting Psychology, Vol. 21, No. 3, June 1957, p. 207-210.

In the "indirect versus direct" dimension the point of distinction resides in whether or not the subject knows the purpose of the test. In the direct dimension the respondent's understanding of the purpose of the test and the psychologist's understanding are in agreement. In the indirect dimension the chief characteristic is a facade, i.e., a false assignment is given to the respondent which detracts from recognizing the true purpose of the test, but which provides him with a plausible reason for cooperating. Another possibility in the indirect dimension is that the psychologist interprets the responses in terms of dimensions and categories different from those held in mind by the respondent while answering.

In the "free response versus structured response" dimension the point of distinction is the amount of freedom the subject has in choosing his response. The free response dimension has the characteristic of not suggesting answers or alternatives to the respondent, of not limiting the range of alternatives available. In the structured dimension there is a limited array of alternatives available.

These three dimensions are then combined to describe various kinds of psychological tests, and examples of the resultant type are given. Campbell concludes that most projective techniques like word-association tests, drawings, the Rorschach, and the Thematic Apperception Test are

voluntary, indirect and free response, but that there are many other possible variations. Tests like the Minnesota Multiphasic Personality Inventory, the Edwards Personal Preference Schedule, or most tests scored with an empirical key would be classified as voluntary, direct and structured.

A self-ranking or rating sheet in which the subject is asked to appraise traits of his personality make-up would be classified as voluntary, direct and free response.

Saul Rosenzweig⁶ in 1950 suggested a three-fold classification of assessment methods using the terms objective or overt, subjective or covert, and projective or implicit levels of reference. Rosenzweig believes that each of the three classes taps a different level of behavior. In the "subjective" category the subject takes himself as the direct object of observation. Questionnaires, personality inventories and autobiographical materials are examples of assessment methods in this category. In the "objective" category the observer takes the subject as a direct object of observation. Observations by trained observers through one-way screens and recordings via the psychogalvanometer are given as examples of methods in this division. In the projective category "the subject in cooperation with the

⁶ Saul Rosenzweig, "Levels of Behavior in Psycho-diagnosis with Special Reference to P-F Study", in the American Journal of Orthopsychiatry, Vol. 20, No. 1, January 1950, p. 63-72.

observer looks the other way at some ego-neutral object".⁹ At this level of behavior the subject responds impersonally, in terms of unconscious or latent attitudes, feelings, and thoughts.

Rosenzweig makes the valid point that these levels are not dependent upon and not exclusively associated with one or another of the psychodiagnostic methods. For any one psychodiagnostic method any one or all three levels may be operating; it is up to the interpreter to ascertain what level was operating. This is no easy task and the examiner must rely on supplementary information to determine the actual level adopted by the subject in his test performance.

Cattell¹⁰ in 1951 also suggested a three-fold classification in assessment of personality: (1) life record data, in which observations or measurement are made in terms of behavior in every day life situations of the subject; (2) self-rating data which yield a picture of how the person sees himself introspectively; and (3) objective test data which, unlike self-rating data, do not depend on the correctness of the subject's self-estimate or his willingness to

⁹ Rosenzweig, Op. Cit., p. 63.

¹⁰ Raymond B. Cattell, "Principles of Design in Projective or Misperception Tests of Personality", found in An Introduction to Projective Techniques, edited by H.H. Anderson and G.L. Anderson, New York, Prentice-Hall, 1951, p. 55-98.

communicate honestly, but which infer personality from actual behavior in a defined, reproducible situation like a laboratory experiment or a standardized test.

Cattell's objective-test data grouping is then subdivided into five major categories: expressive or stylistic behavior, miniature test situations, pure-process approach, a miscellaneous category, and misperception tests. Cattell's category of misperception test corresponds to what has traditionally been referred to as projective methods. He suggests that the fundamental process involved in projective tests is not projection but misperception. The misperception results from the subject's defenses and the test measures differential perception of a situation against a true perception or norm. He further indicates that such devices may be classified into four different types, depending upon the form of misperception that operates. In the first type the instrument depends on the naive misperception of the subject. Here the individual is unable to recognize the fact that others feel and think differently than he does and, as a result, he generalizes his own perceptions to everyone else. In the second type the test utilizes the process of autism. Here the individual distorts his perception so that he reduces or satisfies his own needs or desires. In the third type the instruments involve press compatibility misperception. Here the individual views the environment as existing

in such a way as to fit or make reasonable his motives and affective states. Finally, Cattell speaks of the devices that depend upon ego defense misperception, where the distortion in perception takes its form from the repressed motives which are protected by the various mechanisms of defense.

Helen Sargent¹¹ and Gardner Lindzey¹² have restricted their classificatory schemas to projective methods, but a brief exposition of their work may help to further elucidate the problem of classification. Sargent¹³ considers the problem of classifying projectives in terms of: (1) the nature of the material presented to the subject; (2) the functional use the subject makes of the materials; (3) the method of presentation used by the examiner; and (4) the purpose for which the test is employed.

Lindzey¹⁴ believes that the final type of classification of projective methods is one based upon difference in type of response elicited by the test material, since it is the most important aspect of the test situation. The

11 Helen Sargent, "Projective Methods; their origins, theory, and application in Personality Research", in the Psychological Bulletin, Vol. 42, No. 5, May 1945, p. 257-293.

12 Gardner Lindzey, "On the Classification of Projective Techniques", in Psychological Bulletin, Vol. 56, No. 2, March 1959, p. 152-168.

13 Sargent, Op. Cit., p. 267.

14 Lindzey, Op. Cit., p. 162.

essential consideration here is that this classification seems most likely to be closely related to the underlying psychological process involved in the various tests, for it is this classification that points to what the subject is actually doing. Lindzey lists the following five categories: (1) associative techniques; (2) construction techniques; (3) completion techniques; (4) choice or ordering techniques; and (5) expressive techniques. The Thematic Apperception Test would be an example of a construction technique, while a multiple choice Rorschach would illustrate a choice or ordering technique.

Lindzey¹⁵ points out that we should expect overlap in any classificatory schema because there is overlap and ambiguity in the world of reality. He believes that, when instruments are classified according to his scheme, the instruments brought into the same category have a general congruence and psychological consistency that make it easily possible to conceive of similar underlying psychological processes.

Lindzey in his most recent book offers a definition of projective techniques which seems well thought out, and inclusive enough to be meaningful. He suggests that:

15 Lindzey, Op. Cit., p. 162.

A projective technique is an instrument that is considered especially sensitive to covert or unconscious aspects of behavior, it permits or encourages a wide variety of subject responses, is highly multidimensional and it evokes unusually rich or profuse response data with a minimum of subject awareness concerning the purpose of the test.¹⁶

From the presentation of classification schemes thus far, it can be seen that there is a certain amount of overlap among the authors. Campbell's distinction of "voluntary versus objective" partially overlaps Rosenzweig's discussion on levels of response in psychodiagnostics. Rosenzweig's category of "subjective" seems to belong with the "voluntary" class of Campbell's, since they both emphasize the subject's self-conscious focus on describing himself. These two categories also seem to be essentially the same as Allport's direct category, where conscious self-report is emphasized.

In Rosenzweig's "projective" category the respondent looks away from himself at some "ego-neutral object" as in the phenomenologically objective orientation of Campbell. At the same time, Rosenzweig's category called "objective" is not the same, but refers to the psychologist's orientation, and includes a behavior sampling approach not relevant to the present discussion.

¹⁶ Gardner Lindzey, Projective Techniques and Cross Cultural Research, New York, Appleton-Century Crofts, 1961, p. 45.

Cattell, in discussing the varieties of projective techniques, classifies certain approaches as a variety of objective tests employing misperception. His usage is in agreement with that of Campbell, but the agreement seems to be limited, since on many points the analysis differs. For example, Cattell places the Thematic Apperception Test and the Tautophone in the same subtype, while in Campbell's analysis the Thematic Apperception Test is voluntary and the Tautophone the most classic example of the objective category. Cattell's substitution of misperception for projective methods expands the concept of projective methods; at the same time this approach attempts to make projective methods an integral part of an objective scientific test approach.

In summary, we see Campbell's system of classification focussing on the subject's orientation, while Rosenzweig, in contrast, refers to the psychologist's orientation. Cattell's unique contribution is the introduction of the term "misperception", which symbolizes an attempt to objectify projective assessment methods. Sargent, in her discussion of the classification of projective methods, posits four principles which include the material presented, the method of presentation, the use made of the material by the subject, and the purpose for which the test is employed. Lindzey's classificatory approach is based on the type of response

elicited by the test material. There seems to be as much variety in classificatory approaches as there have been attempts to classify, but at the same time there are common threads running throughout, and there seems to be a basic agreement on major issues.

As previously mentioned, Allport, in his discussion of personality assessment techniques, dichotomizes quite simply into direct and projective methods, direct methods referring to procedures in which the subject is asked "consciously to report" about some feature (motive, feeling, need, etc.) of his personality. On the basis of this dichotomy, the classification of direct methods includes such diversified tests as the Strong Interest Inventory, the Allport-Vernon-Lindzey Study of Values, and the Minnesota Multiphasic Personality Inventory, as well as methods that ask the individual a direct question about his motives, such as self-ratings. One could question Allport's dichotomy and the use of the term "direct" for some of the methods he classifies under them. No explicit definition for projective methods is given. A personal correspondence with Allport¹⁷ revealed his own doubts about this classification; he suggested the inclusion of a third dimension, the "indirect" methods, following Davids' 1955 suggestion.

¹⁷ Gordon Allport, personal correspondence with the author, letter dated July 9, 1963.

Dauids¹⁸ in 1955 disagreed with Allport's gross grouping of a variety of tests under the "direct methods" category, suggesting that for many tests the individual, when responding to separate items in a questionnaire, is often completely unaware of the particular dimension of personality being assessed. For example, when he answers true or false to a certain item on the Minnesota Multiphasic Personality Inventory, he probably does not realize that his answer may result in his being categorized as high on the schizophrenic scale. Dauids states:

There may be important differences between a personality measure based on the individual's rating of himself on neuroticism, for example, and a measure based on his indication of whether or not he has experienced several feelings of the general type.¹⁹

For example, in a self-rating report of needs the individual may indicate a low need for affiliation and a high need for autonomy, but given a questionnaire type of assessment technique, he may answer many items which in a more disguised form contribute to a high rating for affiliation and a low rating for autonomy. In other words, there seems to be a difference in the degree of subject awareness of what is being assessed among the different techniques and,

¹⁸ Anthony Dauids, "A Comparison of Three Methods of Personality Assessment: Direct, Indirect and Projective Techniques", in the Journal of Personality, Vol. 23, No. 4, June 1955, p. 423-440.

¹⁹ Ibid., p. 424.

consequently, the introduction of the classification "indirect methods" seems to add greater clarity and greater refinement.

The systems of classification presented are by no means exhaustive, but they serve to illustrate the rich variety that offers itself to the person who surveys this area, and how arbitrary a chosen classificatory scheme must be at this time. The problem is how to choose among all these alternatives. Since the present study stems from Allport's theoretical position concerning the responses of normal and neurotic subjects on personality assessment methods, it is felt that the addition of Davids' "indirect method" to Allport's direct and projective dimensions will yield both the simplicity and refinement necessary. The principle of classification in this approach is the degree of subject awareness of what is being assessed. This principle seems to best serve the purpose of the present research. Davids has suggested the following literary definitions:

Direct Methods - Those techniques which openly ask the individual about some relevant aspect of his personality make-up and accept his response at face value.

Indirect Methods - Those techniques which present the subject with objective standard materials but use his responses to provide a measure that he may not be aware of.

Projective Methods - Those techniques which employ perceptions, interpretations and associations in response to ambiguous stimuli as an avenue leading to an assessment of the personality dynamics of the perceiver.²⁰

²⁰ Davids, Op. Cit.

3. Allport's Theory and Related Studies.

The theoretical link and justification for the present study stems from the writings of Gordon Allport.²¹ In 1953, in an expository article, Allport points to the fact that in the past century there has been an unprecedented expansion in the use and development of projective methods for the study of personality, and a tendency to avoid the more direct approaches. Allport sees this trend as being one aspect of a greater movement in the field of personality which leads to an attitude that promotes disrespect for the conscious report of the individual.

He²² believes that modern theorizing in motivation has resulted in an attitude of contempt for the "psychic surface" of life. The search for hidden dynamics and for unconscious motives has led the psychologist to avoid asking an individual for a direct report. Instead, the preference is to use projective devices which purport to get at real conscious motives, feelings, and conflicts of the individual.

Allport believes that the psychodynamics or motives of the normal individual may, to a large degree, be taken as

²¹ Allport, "The Trend in Motivational Theory", Op. Cit., p. 107-119.

²² Ibid., p. 108.

he reports them. His conviction is that the normal adult, at least when contrasted with the neurotic, will give essentially the same information concerning his motives on direct methods of assessment as he will on projective methods. The neurotic individual, on the other hand, who is typically more defensive, and whose motives are repressed and displaced by fears and hostilities, will reveal a restricted awareness of his motives and, consequently, there will be a discrepancy between his responses to the direct and projective methods of assessment. The author states:

Thus the direct responses of the psychoneurotic cannot be taken at their face value. The defenses are high, the true motives are hidden and betrayed only by projective techniques. The normal subjects, on the other hand tell you by the direct method precisely what they tell you by the projective methods. They are all of a piece. You may therefore take their motivational statements at face value for even if you probe you will not find anything substantially different. ²³

Allport does not reject projective methods, nor does he deny the existence of "infantile systems, troublesome repressions, or neurotic formations".²⁴ He believes that projective methods should be used primarily with the neurotic who has less awareness of the needs and motives behind his behavior. Even in the case of neurotics, he says, projective methods must be used in conjunction with direct

²³ Allport, Op. Cit., p. 114.

²⁴ Ibid., p. 114.

methods, for only in this way can it be known that the dynamics are unconscious. He stresses the need for the complimentary usage of both direct and projective methods in order that projective methods can be properly interpreted, and a maximally accurate personality assessment made.

In summary, Allport takes the consistent stand in his theory of personality that the normal adult is able to comprehend his general personality make-up and can accurately describe his dominant motivational pattern, whereas the neurotic who is functioning more in terms of past infantile motives, of which he is largely unaware, must present a defensive facade which distorts any direct report of his general personality make-up.

Allport's contention concerning the difference in performance for normal and neurotic subjects, on direct and projective methods of assessment, appeared in the literature ten years ago. However, surprisingly few studies have investigated the comparative effectiveness and intervalidity of direct and projective methods administered to a normal and neurotic group of adults which were designed to measure a specific variable or syndrome. The presentation of the relevant research will begin with the exposition of four studies which have directly tested Allport's hypothesis, and follow with a group of studies which are more indirect, but whose implications make them relevant.

Getzel's²⁵ doctoral dissertation conducted at Harvard in 1951 is acknowledged by Allport as the research which immediately brought to his attention the phenomenon of differences in size of discrepancy between normal and neurotic subjects on direct and projective methods. In this research Getzel utilized two forms of a sentence completion test, one couched in the first person, the other in the third person. The assumption being made was that the sentence completion test couched in the third person was a projective method. For example, in the direct versus the projective form, the items were worded as follows: "When they asked Frank to be in charge he (...)", versus "When they asked me to be in charge I (...)". The two forms of the test were combined in a randomized fashion, but scored separately.

Getzel's sample consisted of twenty-five veterans who were diagnosed as "well adjusted", and forty who were diagnosed as "psychoneurotic" and discharged from the service with personality disorders. At the time the study was conducted all of the subjects were applying for financial grants at the Veterans' Administration Guidance Center.

25 J.W. Getzel, "Assessment of Personality and Prejudice by the Methods of Paired Direct and Projective Questionnaires", unpublished thesis, Harvard, 1951, as quoted by Gordon Allport, "The Trend in Motivational Theory", Op. Cit., p. 107-119.

In this study Getzel found that the maladjusted veterans gave no more maladjusted responses to the direct items than did the well adjusted veterans, but on the projective measures the maladjusted group showed considerably more maladjustment than did the normal group. The discrepancy between the direct and projective assessment technique was significantly greater than it was with the normal group. Getzel reasoned that, since the maladjusted veterans were anxious to "pass inspection" in order to receive the grants, their performance on the direct approach was artificial and indicative of defensiveness. Projective items, on the other hand, were much less transparent and consequently by-passed defensive barriers and evoked honest personality qualities. He concluded that, where self-interest was gained by meeting normative expectations, projective measures of personality would most effectively discriminate between the adjusted and maladjusted. It might be noted that, although significant results were obtained, the motivational factor was not controlled for. While Getzel points out that the maladjusted veterans were anxious to "pass inspection", it should be noted the normal subjects were in a similar motivational state. Subsequent research conducted by Davids and Pildner strongly points to the necessity of controlling for the motivational factor. There seems to be a discrepancy between what was concluded by Getzel and what can be concluded.

In 1955, following Allport's theoretical position on the issue of direct versus projective measures, Davids²⁶ conducted an investigation using a trichotomy of direct, indirect and projective methods of assessment. The aim of this study, conducted at Harvard University, was to compare measures of "effectiveness of adjustment".

In two separate experiments, each employing male undergraduates as subjects, two interrelated hypotheses suggested by Allport were submitted to empirical test. Davids predicted in both experiments that (a) neuroticism as measured by the Psychosomatic Inventory would correlate with poor adjustment as measured by each of the other direct and projective methods of assessment and (b) there would be concordance among rank orders on the five measures of poor adjustment.

In the first experiment the sample consisted of twenty normal subjects who had volunteered to be studied intensively. They were informed that the data would be used solely for purposes of scientific research and were guaranteed anonymity. In the second experiment the twenty-three normal subjects, who had also volunteered to be studied and were closely matched with the first sample, were informed that the results of assessment would be utilized in selecting one of them for a desirable position. The hypotheses

26 Davids, Op. Cit., p. 423-440.

predicted a significant degree of agreement among rank orders on maladjustment assigned on the basis of the following procedures: (1) psychosomatic inventory; (2) self-ratings; (3) personal interviews; (4) sentence completion techniques; and (5) word-association technique. The hypotheses were confirmed in both experiments.

When the two groups were compared it was found that inter-correlations among the different measures and the coefficient of concordance were of considerably lower magnitude in the second experiment. The coefficient of concordance for the first group was .72, and .56 for the second group. While it is not possible to test the significance of difference for W_s , this difference in magnitude indicates that the degree of concordance was greater in the first group. They also found that a comparison of mean scores and variances in the two groups revealed that, as expected, the subjects in the second group evidenced less maladjustment and greater homogeneity on each of the measures. These differences, however, attained a satisfactory level of statistical significance on just two of the measures: the self-rating and the word-association technique. There was a consistent finding of less variability among the subjects in the second experiment. This is exactly what one would expect in a group of individuals who were trying to distort their responses in the direction of the socially acceptable answer.

The author concluded that performance on personality measures is a function of many variables, one of the most important of which is motivation.

David, in his suggestions for further research, suggests that it would be advisable to incorporate the Rorschach or Thematic Apperception Test in the design of future investigations of these matters. He reasoned that, although they were more complex and difficult to score, these instruments were less susceptible to deception than were sentence-completion and word-association techniques; moreover, due to their popularity in applied settings, research findings with these two standard projective tests would seem to be particularly valuable.

It seems that, in a study aimed at comparing three methods of personality assessment, the extent of comparison becomes highly limited when the variable being assessed is as broad as "effectiveness of adjustment". It seems to be a well known fact that different tests measure different aspects of behavior and at different levels. It also seems that the results would have been less ambiguous had the techniques aimed at measuring a more specific aspect of behavior, like anxiety or needs, instead of a global variable which consists of many different traits.

In a more extensive investigation in 1958 Davids and Pildner²⁷ conducted research designed to test Allport's hypotheses concerning the congruence of the normal adult's responses to direct and projective methods of personality assessment, again interjecting the independent variable of varying motivational conditions.

In this study a battery of nine personality measures were assembled which included the following four projective techniques: a word-association test, a sentence-completion test, the Azzageddi Test and the Thematic Apperception Test; and five direct instruments: a self-rating scale, the Happiness Scale, the Affect Questionnaire, the Psychosomatic Inventory of McFarland and Swety, and the Taylor Manifest Anxiety Scale. The researchers also included a clinical evaluation of each subject, on the basis of an initial interview by a psychologist prior to the testing program.

The authors utilized a sample of forty-three normal male college students. The control group consisted of twenty normal male undergraduates who were volunteers, paid for their time, guaranteed anonymity, and encouraged to be honest and uninhibited in the cause of science. The experimental

²⁷ Anthony Davids and Henry Pildner, "Comparison of Direct and Projective Methods of Personality Assessment Under Different Conditions of Motivation", in Psychological Monographs, Vol. 72, No. 11, Whole No. 464, 1958, p. 1-30.

group consisted of twenty-three male undergraduates not majoring in Social Relations or Psychology, and who had applied for employment as a research assistant at Harvard Psychological Clinic. The authors mention²⁸ that they expected that the experimental subjects would attempt to distort the personality measures in an effort to appear mature and well adjusted. Because of the nature of the projective test material, it was predicted that the experimental group would be unable to alter significantly their performance on the projective measures so as to appear exceptionally well adjusted or, in this case, "non-alienated". However, since the direct instruments were more transparent, it was expected that they would be quite susceptible to distortion. Since the control group was motivated to respond honestly to these assessment measures, the experimenters predicted that the experimental group would show significantly less alienation on the direct measures, and would not differ from the control group on the projective test alienation score. Also, it was predicted that the experimental group would perform less consistently on direct and projective tests and, therefore, in comparison with the control group would show less concordance among rank orders based on the results of the various measures.

28 Davids and Pildner, Op. Cit., p. 27.

Both hypotheses were confirmed, but the authors found, in comparing the actual magnitude of the correlations within each group, that the experimental showed less consistency from measure to measure and obtained lower scores on all adjustment measures.

Their final conclusion was that, although Allport's contention of congruence between direct and projective measures was supported, the study also demonstrated that performance on personality measures is a function of many variables, one of the most important of which is the motivational conditions at the time of testing.

The results demonstrated that distortion is likely to take place on direct personality measures as the result of the motivational situation and that projective methods can be used effectively to control assessment deception.

It should be mentioned that in this study the ten Thematic Apperception Test cards used were 1, 3BM, 4, 5, 6BM, 7BM, 11, 14, 15, 18BM, and that the frequency and intensity of scorable material was taken into account. The authors also introduced two innovations in the administration of the Thematic Apperception Test, exposing the card for twenty seconds and having the story-teller give a proper name for the chief character in the story.

The authors also comment on neurotic reactions to the two types of assessment techniques but, since only two of the subjects could be classified as maladjusted, their generalizations do not seem warranted.

Keating's²⁹ master's thesis conducted at the University of Ottawa in 1960 was based on Allport's postulate that direct and projective measures of assessment would reveal the same information about the motives and attitudes of the normal person but, with the maladjusted individual, projective techniques would elicit repressed material which would be contrary to that expressed on direct measures of personality.

He used an experimental form of the Saak's Sentence Completion Test, made up of sixty self-referent items and sixty matched other-referent items, mixed at random. On the basis of the criterion of the psychiatric assessment, an experimental population was divided into an "adjusted" group of fifty subjects and a "maladjusted" group of twenty-nine.

Each set of sixty items was scored separately, and each response was scored either "positive" or "negative" with reference to adjustment. "Negative" responses were summed to provide the final scores.

²⁹ Arthur Keating, "Self-Referent Versus Other-Referent Incomplete Sentences in Projection", unpublished Master's thesis, presented to the School of Psychology and Education at the University of Ottawa, Ontario, 1960, ix-130 p.

Keating hypothesized that there would be no significant differences between the two forms of the Sentence Completion Test for either group, and that there would be no significant differences between group on either form of the test.

He found that each group obtained a significantly higher mean score on the other-referent form of the test, but that the two groups did not differ significantly on either form of the test.

He interpreted these results to indicate that while the other-referent type of item, by its nature, elicited a greater number of unfavorable responses, it did not distinguish between the adjusted and maladjusted individuals. His assumption that Allport's rationale was correct led him to conclude that neither type of item could be considered a "projective" method. It should be noted that, while this assumption gave Keating a basis for his study of sentence completion forms, it seems premature in view of the validating evidence presented in the literature.

Another criticism that might be leveled at Keating's research concerns his analysis. In making a mean comparison of the two groups for each form of the test, he has masked some of the information that could have been obtained. If he had carried his analysis a step further and showed the frequency of change for the two groups on individual items,

his analysis would have been more in keeping with Allport's original hypothesis. Allport suggests that the basic difference between the normal and neurotic group lies in direct acceptance and awareness of motivational and personality factors. By stopping the analysis at a comparison of mean differences, he has obscured the possibility of detecting change of response on the two forms of the test. In other words, it is possible that the normal group would have essentially the same problems as the neurotic group, but admit to it on both type of items, while the neurotic would deny it on the self-reference and admit to it on the indirect form. Consequently, an analysis of the frequency of the change would have been more illuminating.

It should also be mentioned that the question as to whether a first person or third person sentence completion test is a projective or non-projective method of assessment is still a controversial issue. Keating's extensive review of studies using both stimulus forms of the sentence completion tests leads him to conclude that:

Studies (...) have failed to contribute to over-all agreement as to the projective or non-projective nature of the self-referent and other-referent stimulus items in a sentence completion test.³⁰

30 Keating, Op. Cit., p. 81.

Other studies which offer indirect evidence for and against Allport's contention concerning the direct versus projective problem will now be cited and critically evaluated.

As early as 1934 Laslett and Bennett³¹ administered the Kent-Rosanoff Word Association Test, and the Bernreuter Inventory. The Bernreuter Inventory was only scored on scale B1-N, or the scale for neurotic tendencies. The tests were administered to a group of 164 normal college students at Oregon State College. Although good subject-experimenter rapport was reported, there was a marked lack of agreement on neurotic tendencies between the two measures. The products moment correlation reported was $-.000$, while the rank order index was $-.027$. The subjects were suspected of conscious protection of sensitive personality areas on the direct instrument, as well as overstatement resulting from too great an awareness of minor weaknesses. Many of the students reported that one or more of these factors had decreased the accuracy of their reports.

In 1947 Ellis³² conducted a study which aimed at studying the effects of using direct and indirect phrasing

31 H. Laslett and T. Bennett, "A Comparison of Scores on Two Measures of Personality", in the Journal of Abnormal and Social Psychology, Vol. 28, No. 41, March 1934, p. 459-461.

32 Albert Ellis, "A Comparison of the Use of Direct and Indirect Phrasing in Personality Questionnaires" in Psychological Monographs, Vol. 61, No. 3, Whole No. 284, 1947, p. 1-41.

of personality questionnaires. Ellis was interested in testing the hypothesis that personality tests administered in a direct and indirect test form would differentiate between groups of behavior problem and non-problem children. The experimental groups consisted of forty behavior problem boys, and 221 non-problem boys from regular seventh and eighth grade classes of three New York City Junior High Schools. The "problem" cases consisted of pupils who had been brought to the attention of the school principal on several occasions and had been referred to the school psychologist for special guidance. He found that the score of the two groups did not differ significantly on the direct items, but the problem child group showed considerably more maladjustment on the indirect items. Within both groups a significantly greater number of maladjustment responses were given to the indirect items.

In 1947 Combs³³ conducted an investigation comparing the Thematic Apperception Test and autobiographies. The protocols were analyzed in terms of the individual's "desires" as expressed on each instrument. The sample consisted of forty-six students in Mental Hygiene Classes at Syracuse

³³ Arthur Combs, "A Comparative Study of Motivations as Revealed in TAT Stories and Autobiographies", in the Journal of Clinical Psychology, Vol. 3, No. 4, January 1947, p. 65-75.

University. The subjects wrote stories in response to twenty pictures of the Thematic Apperception Test and autobiographies covering specified topics. In this way, 907 Thematic Apperception Test stories and over fifteen hundred pages of autobiographical material was obtained for analysis. A large area of overlap was noted in the two instruments, especially in the areas of security, recognition and response. In terms of the totals, a rank order correlation of .739 was found for the two instruments. This expresses a fairly high degree of relationship between the frequencies with which each instrument reveals specific desires. It is apparent that the two instruments have a considerable area of overlap with respect to motivational analysis. The Thematic Apperception Test tended to elicit desires in the present and future, and more socially unacceptable categories of desire, while the autobiography emphasized the past, milder and more socially acceptable forms of motivation.

In a study conducted by Erickson, Lazarus and Strange,³⁴ using twenty-two normal college students, the authors found a marked lack of relationship between performance under stress and various Rorschach signs. However,

³⁴ C.W. Erickson, R.S. Lazarus and J.R. Strange, "Psychological Stress and Its Personality Correlates", in the Journal of Personality, Vol. 20, No. 3, June 1952, p. 277-286.

information offered by the subjects in a personal interview proved to be an excellent predictor of stress performance.

The author states:

Finally, we may note that our subjects were able to predict the direction of the change in their performance under stress. Assuming that this finding has generality, we are left with the amusing conclusion that, with our present techniques, the best way to predict how a man will perform under stress is to ask him.³⁵

In addition to the lack of relationship found on the Rorschach signs, the authors found that scores on the Guilford-Martin Inventory of Factors, and the Bell Adjustment Inventory also failed to differentiate between high and low stress groups. In no cases were statistically reliable differences obtained, although there was a tendency for the group who showed improvement under stress to be more ascendant on both instruments. These subjects also showed more emotional stability on the Bell and greater self-confidence on the Guilford-Martin. Perhaps, with a larger number of cases these differences would have attained statistical significance.

In 1956 Lindzey and Tejessey,³⁶ studying aggression signs in the Thematic Apperception Test, found that self-

³⁵ Erickson, et al., Op. Cit., p. 285.

³⁶ H. Lindzey and C. Tejessey, "The Thematic Apperception Test: Indices of Aggression in Relation to Measures of Overt and Covert Behavior", in American Journal of Orthopsychiatry, Vol. 26, No. 3, July 1956, p. 567-576.

ratings of twenty Harvard College undergraduates on aggression correlated highly with aggression expressed in Thematic Apperception Test material. This study correlated the Thematic Apperception Test variables with four other measures of aggression, a diagnostic council rating, observers' ratings, the Picture-Frustration Study, and self-ratings. The highest correlations were found between the Thematic Apperception Test variable and self-ratings. Seven of the ten correlations between specific variables were significant at the .05 level and the correlation coefficients ranged from .36 to .73. The authors comment:

We had predicted that the correlations between TAT dimensions and subject's self-ratings would be the lowest of the four sets of relationships examined. Quite the contrary - we find that for all ten TAT dimensions there is a positive correlation with the self-ratings and seven of these correlations reach conventional levels of significance (...). These findings suggest rather strongly that the scores we had derived painstakingly from the TAT protocols represent rather accurately the information we could have secured from the subjects themselves by simply asking them to appraise their own behavior.³⁷

The authors in their conclusion suggest that the sensitivity of the Thematic Apperception Test to covert aspects of behavior depends upon the particular method of analysis used and, consequently, the user of projective

37 Lindzey and Tefesney, Op. Cit., p. 573.

techniques must not assume that he is necessarily dealing with covert or latent aspects of behavior.

In a study conducted by Childs, Frank and Storm³⁸ in 1956, the authors explored the relationship between ten forms of social behavior and anxiety about each form through two different measuring devices. The ten forms of social behavior being studied were achievement, aggression, autonomy, deference dominance, isolation, nurturance, responsibility, sociability and succorance.

The sample consisted of male students in an undergraduate psychology course at Yale University. The number of subjects available for the various results reported in a study varied from 104 to 108.

The two measuring instruments in this study consisted of a questionnaire in which the subjects rated themselves on ten items believed relevant to each variable under study, and a group Thematic Apperception Test. Eight standard Thematic Apperception Test cards believed relevant to the variables under study were utilized. The cards used and order followed were as follows: 1, 18BM, 7BM, 13BM, 5BM, 12M, 14 and 10.

38 I.L. Childs, F. Kitty, and T. Storm, "Self Ratings and TAT: Their Relation to Each Other and to Childhood Background", in the Journal of Personality, Vol. 25, No. 1, July 1956, p. 96-114.

In the analysis of the data, the authors formulated the hypothesis that the mention of a form of behavior in the Thematic Apperception Test story should be positively related to a self-rating of the same form of behavior. In order to check this hypothesis, self-rating scores were plotted in relation to frequency of mention of the most relevant forms of behavior on the Thematic Apperception Test stories. Wherever the number of cases was sufficient, self-rating of positive tendency and of anxiety were plotted in relation to both of these variables, as mentioned in the Thematic Apperception Test. The outcome appeared to be entirely random. For most variables, differences in average self-rating scores according to the number of mentions of the corresponding theme was very small in relation to the amount of variability. Neither in these small differences nor in the slightly larger differences, which occurred with some of the variables, was there any consistency in the direction of the relationship from one variable to another; moreover, the relationships were not significantly different.

Piccinin's³⁹ master's thesis, conducted at the University of Ottawa in 1960, attempted to test Allport's theory

³⁹ Sergio Piccinin, Assessment of the Body Attitudes of Normal Individuals by Direct and Indirect Measures, unpublished Master's Thesis, presented to the School of Psychology and Education of the University of Ottawa, Ontario, 1960, vii-30 p.

that normal subjects do not differ on direct and projective test performance by extending it to the area of body attitudes.

He used two measures of body attitude. The projective measure was the Barrier score obtained from the Rorschach, while the Body Cathexis Test, which asks subjects to rate forty-six of their body parts on a five-point scale, was the direct measure. His sample consisted of seventy-eight male and sixty-two female students at the University of Ottawa.

This research did not show any significant relationship in the expected direction; in fact, a slight tendency in the opposite direction was indicated. The author felt that this lack of relationship stemmed from the lack of discrimination that the rating categories of the Body Cathexis Test afforded. The present writer feels that the author's assumption that the Barrier score measured unconscious attitudes and feelings about one's body was a premature assumption in view of the validating evidence presented. It might also be noted that the Barrier score obtained from Rorschach protocols seemed to provide too gross a measure of body attitude, in comparison to the relatively refined measurement by the direct method. This lack of direct comparability could easily affect the statistical outcome.

4. Summary and Basic Hypothesis.

Of the eleven research reports reviewed, seven studies lend evidence to Allport's hypothesis, while the remaining four did not yield the expected results. Only two of the studies cited tested Allport's hypothesis of wide discrepancy among assessment methods with neurotic adults. The contradictory results of these two studies points to the need for more research utilizing neurotics. Keating, who was primarily interested in the projective nature of sentence completion forms, found no significant differences between the two groups, while Getzel's research substantiated the Allportian view. It should be noted also that Getzel's assumption that a third-person form sentence completion test is a projective method is a controversial issue in the literature. The paucity of research with neurotics and the lack of research aimed at specifically measuring motivational variables seems to provide justification for the existence of the present investigation.

Criticisms of individual studies have been offered when the studies were presented, but it is difficult to assess the overall impact of these studies. This difficulty is due to the wide variety of assessment methods used, the lack of essential controls in some studies, the varying sample sizes, and the research aims of the different

investigators. The results of the research conducted thus far do point to the contradictory findings obtained and the definite need for a more elaborate investigation with assessment methods that are more specifically focussed on variables that are more directly comparable.

In order to ascertain the degree of congruence existing between the responses of normal and neurotic adults as derived from direct, indirect and projective methods of assessment, it seems essential that the variables compared be basically the same for each method. This deficiency has been a criticism of two of the important studies previously cited. The tendency to use a global variable like "effective adjustment" seems to contra-indicate a genuine comparison among assessment methods at the three different levels.

It is this consideration that has led the present investigator into the realm of need assessment. The assessment of needs provides relatively clearly defined and specific variables of a motivational nature. The existence of a direct, indirect and projective method which will measure needs has further facilitated this choice.

It is out of these deficiencies and problems that the present investigation has evolved. The present writer is seeking an answer to the specific question: Will there

be a difference in the degree of congruence existing between the expressed needs of normal and neurotic adults as derived from direct, indirect and projective methods of need assessment with respect to Gordon Allport's theoretical position?

CHAPTER II

EXPERIMENTAL DESIGN

This chapter describes the procedures followed to test the research hypotheses proposed in the preceding chapter. Presentation of the design has been broken into six sections.

The first section is concerned with the statement of the statistical hypotheses of the present research. The second section will be concerned with the description of the subjects used in this study. The tools of the research are then described with particular attention paid to the rationale behind selection of the instruments used, and the basis for selection of the particular Thematic Apperception Test cards. The fourth section specifies the procedures followed in administering the tests while the fifth section describes the method of scoring the Thematic Apperception Test. The final section describes the statistical procedures employed.

1. Statement of the Statistical Hypotheses.

As will be recalled from chapter one, the specific research question of the present study is: Will there be a difference in the degree of congruence existing between the expressed needs of normal and neurotic adults as

derived from direct, indirect and projective methods of need assessment?

From this specific hypothesis five major statistical hypotheses can be derived which bear on Allport's theory of the response discrepancy of neurotic and normal subjects to different methods of assessment. In full form:

- I. There are no significant differences between normal and neurotic adults with regard to their discrepancy scores on direct versus indirect methods of need assessment.
- II. There are no significant differences between normal and neurotic adults with regard to their discrepancy scores on direct versus projective methods of need assessment.
- III. There are no significant differences between normal and neurotic adults with regard to their discrepancy scores on indirect versus projective methods of need assessment.
- IV. There are no significant differences between the rank-order positions of direct, indirect and projective methods of need assessment for the normal adults with regard to each of the ten needs.
- V. There are no significant differences between the rank-order positions of direct, indirect and projective methods of need assessment for the neurotic adults with regard to each of the ten needs.

2. The Subjects.

The group of normal subjects was composed of a total of sixty adult males ranging between the ages of nineteen and fifty. The subjects were enrolled in an introductory

course in Psychology at Saint Patrick's College in Ottawa and the University of Detroit in Michigan. Both groups consisted of part-time students in the Adult Evening Extension programs.

All testing was conducted during the first three weeks of class in order to avoid the increased psychological sophistication that would result from the knowledge gained in the courses themselves. All of the subjects in the normal group were initially screened with the first 506 items of the Minnesota Multiphasic Personality Inventory Test and any subject with a "T" score above 70 on the Hypochondriasis, Depression, or Hysteria scale of the Minnesota Multiphasic Personality Inventory was excluded. Only one subject was excluded on this basis.

The mean age of the normal group was 27.76 years with a standard deviation of 6.54. The mean level of education obtained was 12.15 years with a standard deviation of 1.29.

The second group of subjects was composed of thirty male outpatients, who received a psychiatric diagnosis of neurotic reaction. The division of the number of patients according to the diagnostic sub-categories of neurotic reaction is as follows: sixteen neurotic depressive reactions, 11 anxiety reactions, and 3 obsessive-compulsive reactions.

The neurotic subjects were selected from the Out-patient divisions of Ottawa Civic Hospital in Ottawa, Ontario, and Ancora State Hospital in Hammonton, New Jersey. The diagnoses arrived at by the psychiatrist at both institutions were based on the Mental Statistics Handbook.¹ The majority of patients were being administered tranquilizers of varying dosages. No patients were receiving electro-convulsive therapy, nor had any of the patients been receiving therapy for a period longer than three weeks.

The ages of the neurotic group ranged between eighteen and forty-five years. The mean age of the neurotic group was 27.43 with a standard deviation of 6.99. The mean level of education attained was 11.56 years with a standard deviation of 1.29. Table I presents in summary form a description of group characteristics.

The normal and neurotic groups were matched for age, and educational levels attained, since it was felt that these variables might affect the test results. The groups were compared through the use of the "t" test for uncorrelated groups and the results of this comparison are shown in Table I. No significant difference was found beyond the .01 level of probability between the means or standard

¹ Mental Statistics Handbook, second edition, Dominion Bureau of Statistics, Health and Welfare Division, Queen's Printer, Ottawa, Ontario, 1954, iv-79 p.

Table I.-

"t" Test of Means Between Normal and Neurotic Subjects on Age and Education (N = Normals: 60, Neurotics: 30).

Variable	Stat.	Group		Diff.	σD	t	Signif.
		Normal	Neurotic				
Age	M	27.76	27.45	.32	1.54	.207	-
	σ	6.54	6.99	.45	1.07	.421	-
	σM	.852	1.29				
	$\sigma \sigma$.597	.901				
Education in grades	M	12.15	11.56	.59	2.47	.238	-
	σ	1.29	1.30	.01	1.68	.005	-
	σM	.168	.242				
	$\sigma \sigma$.117	.167				

deviations of the groups with respect to age and educational level.

3. The Tools of the Study.

In order to investigate the degree of congruance existing between the responses of normal and neurotic subjects as derived from direct, indirect, and projective methods of assessment, it seems essential that the variables compared be basically the same for each method. The tendency to use global variables like "effective adjustment", as has been noted before, seems to contra-indicate a genuine comparison.

It is this consideration that has led the present investigator into the realm of need assessment. The assessment of needs provides relatively clear defined, and specific variables.

The ten needs selected for comparison in this study are as follows: achievement, abasement, affiliation, aggression, autonomy, deference, dominance, nurturance, sex, and succorance. The selection of these particular needs was dictated by existing research which investigated the stimulus pull of the Thematic Apperception Test cards. These needs seem to appear most frequently in stories told by subjects to the Thematic Apperception Test stimuli.² These needs

² Leonard Eron, "A Normative Study of the TAT", in Psychological Monographs, Vol. 64, No. 9, Whole No. 315, 1950, p. 1-45.

were also chosen because they are measured by the Edwards Personal Preference Schedule which is being used as the indirect method in the present study.

The description of the three assessment methods also provides the reader with the operational definition of the terms direct, indirect and projective as used in this study. A brief description of each method and pertinent comments regarding its selection follows:

a) Self-Ranking Need Sheet.- This is the direct measure of need assessment. It simply consists of a list of the ten variables being studied. These needs, with a corresponding brief definition taken from Henry Murray's list of definitions in the Thematic Apperception Manual,³ and items taken from the Edwards Personal Preference Schedule are presented to the subjects with instructions to place them in rank order in terms of their motivational strength in his personality make-up. The Self-Ranking Need Sheet and instructions were devised by the present writer, and revised twice for clarity at the suggestion of pilot subjects. This instrument may be seen in Appendix 1.

³ H.A. Murray, Thematic Apperception Test Manual, Harvard University Printing Office, Cambridge, Mass., 1943, p. 9-10.

b) The Edwards Personal Preference Schedule.⁴ This is the indirect measure of need assessment. The Edwards Personal Preference Schedule was designed primarily as an instrument for research and counseling purposes. It provides a quick and convenient measure of fifteen relatively independent personality variables. The fifteen needs the Edwards Personal Preference Schedule purports to measure are as follows: achievement, deference, order, exhibition, autonomy, affiliation, introspection, succorance, dominance, abasement, nurturance, change, endurance, sex, and aggression. The items in the Edwards Personal Preference Schedule and the variables that these statements purport to measure have their origin in a list of manifest needs presented by H.A. Murray.

Although Murray's personality theory stimulated the development of the Edwards Personal Preference Schedule, there is no report in the manual or subsequent literature attempting to show the relationship between the Thematic Apperception Test and the Edwards Personal Preference Schedule. Indirectly, the present research will present some evidence concerning the degree of this relationship.

In the construction of the Edwards Personal Preference Schedule, Edwards prepared sets of items whose content

⁴ Allen L. Edwards, Edwards Personal Preference Schedule, Psychological Corporation, New York, 1954, p. 1-16.

appeared to fit each of these needs. When these items were administered in traditional "Yes-No" form to a group of college students, frequency of endorsement correlated .87 with the judged social desirability of the items. As a result, Edwards adopted the forced choice format, placing in each pair items that were matched in social desirability. Several independent experiments demonstrated that, when judged in terms of general cultural norms, the social desirability of items remains remarkably stable in groups differing in sex, age, education, socioeconomic level, or nationality.⁵

Consistent results were also obtained when the judgment of hospitalized psychiatric patients were compared with those of normal groups. Correlations of the Edwards Personal Preference Schedule scores with the social desirability scale are lower than those of other inventories.

The Edwards Personal Preference Schedule consists of 210 different pairs of forced-choice statements in which items from each of the fifteen scales are paired off twice against items from the other fourteen. In addition, fifteen pairs are repeated in identical form to provide an index of respondent consistency.

⁵ A.L. Edwards, The Social Desirability Variable in Personality Assessment and Research, New York, Dryden Press, 1957, p. 59-71.

Test-retest reliabilities of the Edwards Personal Preference Schedule, as reported in the manual, range from .74 to .58; split-half, from .60 to .87. Score intercorrelations are satisfactorily low; the largest coefficient is .46 between affiliation and nurturance. The next largest is -.36 between autonomy and nurturance. Many of the correlations are close to zero. The low values of the intercorrelations indicate that the variables being measured are relatively independent. Basically, what the Edwards Personal Preference Schedule profile reveals is the relative strength of the different needs. At its present stage, the Edwards Personal Preference Schedule seems to be a highly promising research instrument. A copy of the Edwards Personal Preference Schedule may be seen in Appendix 2.

c) Thematic Apperception Test.- This is the projective measure of need assessment. The Thematic Apperception Test devised by Henry A. Murray and Christiana D. Morgan consists of nineteen pictures printed on white bristol board, and one blank card, calling for a total of twenty stories. The procedure, according to Murray,⁶ simply consists of presenting a series of pictures to a subject and encouraging him to tell spontaneous stories about them. Murray feels that stories collected in this way will reveal significant

⁶ Murray, Op. Cit., p. 1-2.

components of personality. This is due to the psychological tendency of people to interpret an ambiguous human situation in conformity with their past experiences and present needs, and the tendency of those who write stories to do likewise. Murray points out that, if the pictures are presented as a test of imagination, the subject's interest, together with his need for approval, can be so involved in the task that he forgets the necessity of defending himself and reveals significant aspects of his personality, especially his needs. Ten cards were selected for administration to the subjects on the basis of research investigating the "stimulus pull" of the various cards.

There is enough replicated research in the literature to amply demonstrate that each of the Thematic Apperception Test pictures has its own "stimulus pull" in terms of the thematic content and emotional tone told in response to it. This research indicates that each individual picture has its own stimulus properties which evoke themes, identifications, and feeling tones, which are peculiar to it, and which differ from those elicited by other pictures. The most comprehensive research of this nature has been conducted by Leonard Eron.⁷

The selection of the ten cards used in the present study are based on Eron's research. Eron in his study lists

⁷ Eron, Op. Cit., p. 1-45.

for each picture the most frequent theme contributed to each card. Eron's analysis is based on 150 male subjects. This sample includes normal, neurotic and psychotic subjects.

The present writer utilized Eron's research by taking his normative data and listing the three themes most frequently mentioned for each card in the set. This listing was compared with the ten needs being measured in the present study. If a particular card had a theme which seemed to involve one of the listed needs, this card number was noted next to that need. This step was performed in conjunction with another psychologist who served as a counter-check on the author. This procedure was followed for each of the Thematic Apperception Cards. A final tabulation of the most frequently appearing cards determined the cards used in the present study. All of the final ten cards selected were mentioned at least twice. The cards selected were as follows: Cards 1, 2, 3BM, 4, 5, 6BM, 7EM, 10, 13MF, and 18EM. A brief description of each card may be seen in Appendix 3.

Since Eron's normative data are for males and the selection of cards for this study is based upon them, the sample for the present study was also restricted to males.

Since the mean educational level of both groups was at least grade eleven, there was no difficulty in obtaining

satisfactory stories. Ritter's⁸ research indicates that after a normal level of intelligence has been reached, there is no correlation between the quantity or quality of response in the Thematic Apperception Test, and added increments of intelligence. Jacques,⁹ in his research, notes that protocols with satisfactory stories were obtained from subjects with an intelligence quotient of as low as eighty. Since the educational level of both groups contra-indicates an intelligence quotient below eighty, it is felt that this factor was adequately controlled for.

4. Administration of the Tests.

The review of the literature indicated the necessity of attempting to control for the motivational factor. With this in mind, special efforts were made to assure sincerity of response.

Prior to the administration of the tests, the groups were informed that this project was aimed at obtaining data about people in their age range, and that the examiner was interested only in group findings. A plea for sincerity

⁸ J.B. Ritter, "Suggestions for Administration and Interpretation", in Journal of Personality, Vol. 15, No. 1, September 1946, p. 70-92.

⁹ E. Jacques, "The Clinical Use of the TAT with Soldiers", in Journal of Abnormal and Social Psychology, Vol. 40, No. 1, October 1945, p. 363-384.

and cooperation was made and the subjects were assured anonymity. The subjects were told to select a five digit code number for purposes of identification. A copy of these introductory remarks to the subjects may be seen in Appendix 4.

Another attempt employed in controlling for the motivational factor consisted of eliminating those subjects who obtained a consistency score of nine or below on the Edwards Personal Preference Schedule. Edwards in his test manual for the Edwards Personal Preference Schedule states:

If a subject obtains a low consistency score, say less than 9, his scores on the 15 personality variables may be questioned. In the normative sample of 1509 subjects only approximately 2 per cent of the subjects obtained scores this low or lower.¹⁰

The use of the consistency score as a criterion resulted in the elimination of one normal subject and two neurotic subjects. It should also be noted that the consistency score is far from foolproof. This technique, while useful for detection in some cases, is not necessarily a measure of lying, since it is possible to lie consistently.

All tests were administered in a group setting. The size of the group varied from three to ten numbers. There is evidence in the literature to indicate that stories

¹⁰ Edwards, Op. Cit., p. 7.

yielded in a group administration do not differ significantly in very many ways from stories obtained in a routine individual administration. Eron and Ritter's¹¹ study, as well as Lindzey and Heineman's¹² research, indicate that there is no difference in either the themes yielded nor the range of content. A group administration also allowed the writer to more adequately control for environmental factors, such as time of administration, as well as for closer adherence to the test instructions. Total testing time per group averaged two and one half hours.

The tests were administered in the following order: Thematic Apperception Test; Edwards Personal Preference Schedule; and the Self-Ranking Need Sheet. This particular order was decided upon for the following reasons: (1) the degree of ambiguity of the stimuli in the three methods; (2) the duration of tests; and (3) to avoid a "set" which might develop if the direct method were introduced first.

In regard to the Thematic Apperception Test, the subjects were seated at either a round or a square table with the examiner placing the cards in front of them. The

11 L.D. Eron and A.M. Ritter, "A Comparison of Two Methods of Administration of the TAT", in the Journal of Consulting Psychology, Vol. 15, No. 1, February 1951, p. 55-61.

12 G. Lindzey and H. Heineman, "The TAT: Individual and Group Administration", in the Journal of Personality, Vol. 24, No. 2, September 1955, p. 34-55.

cards were exposed for one minute and then the subjects were given five minutes to write their story. This time limit was arrived at after reviewing the Thematic Apperception Test literature on group administration. Lindzey and Heineman's¹³ research on group versus individual administrations also found no difference in the stories told when the subjects were given eight or five minutes. They selected five minutes because they felt that this allowed less time for censoring the stories and because this time limit was less fatiguing. After experimenting with time limits on a pilot group, it was found that this time period was ample for both the neurotic and normal subjects. This time limit was announced to the subjects prior to the exposure of the cards. These instructions may be seen in Appendix 4.

After the administration and completion of the Thematic Apperception Test stories, the subjects were asked to write the name of the hero for each story and, in this way, it was hoped that scorer difficulty in identification of the hero would be reduced. In those cases in which the subject had designated two heroes for the story, the scorer was instructed to score the protocol in terms of the instruction sheet provided. The instruction sheet for scoring the Thematic Apperception Test protocol may be seen in Appendix 5.

¹³ Lindzey and Heineman, Op. Cit., p. 37.

5. Scoring of the Thematic Apperception Test.

The two scorers of the Thematic Apperception Test were supplied with a set of instructions for scoring and a list of definitions of each of the ten needs. The stories were scored for both frequency and intensity of needs. The intensity ratings of the needs as depicted in the stories ranged on a scale from three to one, a rating of three indicating the greatest strength. Prior to the scoring of the research data, fifteen protocols of the pilot group were scored and cross-checked by both scorers to gain practice and familiarity with the scoring method.

The Self-Ranking Need Sheet, which consisted of items taken from Murray's original definitions and items of the Edwards Personal Preference Schedule, was used as the list of definitions for the scoring of the Thematic Apperception Test. This list of definitions was utilized for the scoring of the Thematic Apperception Test protocols in an attempt to assure comparability of need meaning across all three methods. This list of definitions may be seen in Appendix 1.

The set of Thematic Apperception Test scoring instructions provided some framework whereby the scorers could handle problems of scoring. Depth interpretation because of its element of subjectivity was reduced to a minimum by placing primary emphases on manifest content.

The emphasis on manifest content does not mean that subjectivity was avoided, but perhaps it has reduced it.

6. Statistical Procedures.

The statistical analysis of the study employed the use of nonparametric statistics. The fact that the data from the Thematic Apperception Test presented difficulties in meeting the requirements of parametric statistics, namely that the variables be normally distributed and have homogeneity of variance, necessitated devising the Self-Ranking Need Sheet in rank-order form. This difficulty also necessitated that the raw score of the Edwards Personal Preference Schedule be transformed into rank-orders in order to assure comparability of measurement. While the utilization of nonparametric statistics is a second choice to the more powerful parametric techniques, a certain amount of justification does exist since there is question of scores from typical psychometric tests which are better thought of as placing individuals in order rather than as measuring amounts of the trait in question.

The individual protocols of the sixty normal subjects and thirty neurotic subjects in the present study were scored; each subject was then assigned a rank on each of the ten variables for each method of assessment; the ranks were summed and the sums were ranked to provide a final

comprehensive and composite ranking. This composite ranking was utilized in the computation of the reliability coefficients.

The statistical analysis began with an estimate of the reliabilities of the various instruments. Test-retest reliability coefficients were computed for the Self-Ranking Need Sheet and the Thematic Apperception Test. The Spearman rank correlation coefficient was computed and was based on the composite need rankings of the subjects. The formula used was:

$$\rho = 1 - \frac{\sum_{i=1}^N d_i^2}{N^2 - N}$$

Because of the absence of tied ranks on the two instruments, it was not felt necessary to apply the formula which corrects the Spearman rho coefficient for tied ranks.¹⁴ The reliability of the scales of the Edwards Personal Preference Schedule was then determined. A split-half reliability coefficient was found by computing Spearman rho coefficients between the composite need ranks of the rows and columns for the ten variables being investigated. Again, due to the absence of tied ranks on the two halves of the test, it was not felt necessary to apply the formula which corrects the Spearman rho coefficient for tied ranks. Finally, the

¹⁴ S. Siegel, Nonparametric Statistics for the Behavioral Sciences, New York, McGraw-Hill, 1956, p. 204.

inter-scorer reliability between the two independent scorers of the Thematic Apperception Test protocols was computed by the Spearman rank correlation method. The data did not necessitate applying the correction formula for tied ranks.

The Mann-Whitney U Test,¹⁵ the nonparametric alternative for the t test, was applied to test for the significance of difference between the global discrepancy scores of the normal and neurotic groups for the first three null hypotheses. With samples of size thirty and above, the sampling distribution approaches the normal distribution and consequently may be converted to a z for testing the significance of difference between the two groups. The correction for ties was applied when the proportion of ties was large or if the obtained p was very close to the previously set significance level of .01. The formula used was:

$$z = \frac{U - \frac{n_1 n_2}{2}}{\sqrt{\frac{(n_1)(n_2)(n_1 + n_2 + 1)}{12}}}$$

Correcting for ties the formula becomes:

$$z = \frac{U - \frac{n_1 n_2}{2}}{\sqrt{\frac{(n_1 + n_2)}{N(N-1)} \left[\frac{N^3 - N}{12} - \sum T \right]}}$$

¹⁵ Siegel, *Op. Cit.*, p. 116.

The value of U in the above formulae was computed by the following formula:

$$U = n_1 n_2 + \frac{n_1 (R_1 + 1)}{2} - R_1$$

where R_1 = sum of the ranks assigned to the group whose sample size is n_1 . The symbol n_2 refers to the number of cases in the larger of the two independent groups.

The second aspect of the statistical procedures involved a more refined analysis of the first three hypotheses. In this analysis the discrepancy scores of the normal and neurotic subjects were compared for each of the ten variables studied. This analysis was conducted in order to ascertain on which needs, if any, significant differences in discrepancy scores between normal and neurotic subjects occurred.

The median test¹⁶ was the statistical procedure selected to test the null hypotheses. The median test gives information as to whether it is likely that two independent groups (not necessarily of the same size) have been drawn from populations with the same median. The median test was chosen for this aspect of the analysis rather than the Mann-Whitney because of the nature of the data. The discrepancy scores of the normal and neurotic subjects on the individual needs yielded a much larger proportion of ties of

16 Siegel, Op. Cit., p. 111.

greater length than did the previous data used in the computation of the global discrepancy scores.

The method followed in conducting the median test consisted of placing the discrepancy scores for each need in rank order and then obtaining a combined median for the groups being compared. The number of cases falling above and below these combined medians was then determined. In those cases in which many scores fell at the combined median, random assignment of cases was used. The probability of the observed values was determined by employing the chi square test corrected for continuity. The formula used was:

$$\chi^2 = \frac{N \left(\left| \frac{AD}{(A B) (C D)} - \frac{BC}{(A C) (B D)} \right| - \frac{N}{2} \right)^2}{N}$$

The Wilcoxon matched-pairs signed ranks test¹⁷ was employed to test null hypotheses four and five and their sub-hypotheses. The Wilcoxon test is applicable to the case of two related samples when the researchers wants to establish that two conditions are different. The Wilcoxon test utilizes information regarding the relative magnitude as well as the direction of difference from the data available. It gives more weight to a pair which shows a

¹⁷ Siegel, Op. Cit., p. 75.

large difference between the two conditions than to a pair which shows a small difference.

In this analysis, differences between the rank-orders of the direct, indirect, and projective methods of need assessment for both the normal and the neurotic groups were investigated separately for each of the ten variables. In this way the differences from method to method within each group for each need were revealed. This involved the computation of sixty Wilcoxon tests.

For samples larger than twenty-five, the sampling distribution of the sum of ranks approaches the normal distribution and consequently may be converted to a z for testing the significance of difference between the two conditions. The formula used was:

$$z = \frac{T - \frac{N(N+1)}{4}}{\sqrt{\frac{N(N+1)(2N+1)}{24}}}$$

Two-tailed tests of significance were used in all of the statistical analyses conducted.

In this chapter, the experimental design of the investigation was presented. It described the two groups of subjects studied, the instruments used and the rationale of selection, the method of administration, and the statistical analyses of the data. In the following chapter, the results of this investigation will be presented and discussed.

CHAPTER III

PRESENTATION OF RESULTS AND DISCUSSION

This chapter will present the results of the study with interpretation of these results as they are presented. The first section will be concerned with the reliability of the various instruments employed in this study as well as the inter-scorer reliability of the projective method. This will be followed by an inspectional comparison of the rank-ordering of the needs yielded by each of three methods for both groups. The statistical findings relevant to the five major hypotheses of the study will then be presented. This will be followed by a general discussion of the results in terms of their relation to the main problem and hypotheses of the study. The limitations of the present research will be discussed and then the final section will present suggestions for further research.

1. Reliability.

a) Self-Ranking Need Sheet.- To obtain an index of the stability of the Self-Ranking Need Sheet over a period of time, fifty subjects were readministered the Self-Ranking Need Sheet seven days after the initial testing. Thirty subjects were from the normal group and twenty were from the neurotic group. The Spearman rank correlation coefficient

was computed using the composite rankings of the ten needs of the group on the two occasions. The stability coefficient calculated by the above formula was $\rho = .926$. For a sample size ten a ρ of .794 is required at the one per cent level of confidence. Consequently, we can reject the hypothesis at the one per cent level that ρ is zero in the population from which the subjects were drawn. There would be less than one chance in a hundred of obtaining a sample ρ of .926 if the population ρ were zero.

b) Thematic Apperception Test.- The obtained stability coefficient for the Thematic Apperception Test in a test-retest situation with a seven day interval for the same group of subjects previously mentioned was .885. Again, the Spearman rank correlation coefficient was computed using the composite ranking of the ten needs of the group of fifty subjects on both administrations. The obtained ρ of .885 was significant at the one per cent level of confidence.

c) Edwards Personal Preference Schedule.- The obtained equivalent form reliability coefficient for the Edwards Personal Preference Schedule using the ranks of the rows and columns of the ten variables for the combined group of ninety subjects was .794. The Spearman rank correlation coefficient was computed. The obtained ρ of .794 was significant at the one per cent level of confidence. This

reliability coefficient for the combined group is quite comparable to the split-half reliability coefficients reported by Edwards.¹ Edwards who used a normative sample of 1509 subjects including 760 men and 749 women reports reliability coefficients ranging from .60 to .87.

d) Inter-scorer reliability.- Prior to the scoring of the research data fifteen protocols of a pilot group were scored and checked by both scorers to gain practice and familiarity with the method. The Thematic Apperception Test protocols were scored according to the instructions referred to in Appendix 5.

The Spearman rank correlation coefficient was computed using the composite ranking of the ten needs by each scorer. The reliability coefficient yielded for the ninety protocols between the two independent scorers was .879. The obtained r of .879 was significant at the one per cent level of confidence indicating a substantial degree of agreement between the scorers.

For the research purposes of the present study, the obtained reliability indices quoted for the three instruments employed as well as the inter-scorer reliability seem quite acceptable and thus allowed the undertaking of further

¹ Allen L. Edwards, Edwards Personal Preference Schedule, Psychological Corporation, New York, 1954, p. 8.

investigative procedures. The retest data was not treated in the remaining analysis.

2. The Rank-Order of Needs for Both Groups.

The composite rank-ordering of the ten needs utilized in the study of instrument reliability also allows a comparison of the need strength of both groups as measured by the three different assessment methods. The composite need rank-ordering was obtained in the following manner: the individual protocols of the sixty normal and thirty neurotic subjects were scored; each subject was then assigned a rank on each of the ten variables for each of the three methods; the ranks were summed and the sums were ranked to provide a final comprehensive and composite ranking. A rank of one indicates the strongest need. This data is presented in Table II and allows a global comparison of the need rank-order placement for the two groups on the different assessment methods.

The relative need strength in rank-order as measured by the various instruments may be seen in Table II. In this table the composite need rank orders for both groups are reported. The Spearman rank correlation coefficient between the normal and neurotic subjects relative ranking of needs is as follows: direct is .952; indirect is .176; and projective is .752. For a sample size ten a Spearman rho of

Table II.-

Sun of Ranks and Rank Order of Needs for Normal and Neurotic
Subjects on Three Methods of Assessment
(N - Normals:60; Neurotics:30).

Needs	Direct		Indirect				Projective					
	Normals	Neurotics	Normals	Neurotics	Normals	Neurotics	Normals	Neurotics				
	Total Rank	Total Rank	Total Rank	Total Rank	Total Rank	Total Rank	Total Rank	Total Rank				
Achievement	140.0	1	84.0	1 ^a	256.5	1	135.5	3	247.0	3	159.5	6
Abasement	538.0	10	219.0	9	343.0	7	95.0	1	336.0	7	136.5	2
Affiliation	247.0	3	123.0	3	328.5	6	137.0	4	451.5	9	213.0	9
Aggression	494.0	9	231.0	10	370.0	8	218.0	10	239.5	1	146.0	3
Autonomy	192.0	2	115.0	2	287.0	3	181.5	5	333.5	6	169.5	7
Deference	488.0	8	195.0	8	450.5	10	183.6	6	436.5	8	205.5	8
Dominance	298.0	6	193.0	7	263.5	2	184.5	7	488.5	10	227.5	10
Nurturance	268.0	4	145.0	4	318.0	5	120.5	2	260.0	5	152.5	4
Sex	286.0	5	178.0	6	301.5	4	196.5	9	251.5	4	156.5	5
Succorance	378.0	7	158.0	5	404.5	9	196.0	8	246.0	2	80.0	1

a A rank of one indicates strongest relative need.

PRESNTATION OF RESULTS AND DISCUSSION

.794 is required at the one per cent level of confidence. The correspondence between the normal and neurotic subjects on the direct and projective measures of need assessment is relatively high, while the relationship between the two groups on the indirect method is low.

Considering the direct method of assessment an inspection of Table II reveals that there is perfect agreement between the two groups on the four strongest needs. The four strongest needs for the two groups as measured by the Self-Ranking Need Sheet are: achievement, autonomy, affiliation and nurturance respectively. The three needs indicated to have the weakest strength as motivators of behavior for the normal group were abasement, aggression, and deference respectively, while the neurotic group reported aggression, abasement and deference respectively. The similarity between the two groups on the direct method of assessment is perhaps the most striking aspect of Table II.

A comparison of the relative need strength of the two groups on the indirect method of assessment yields a different picture. The four strongest needs for the normal group are achievement, dominance, autonomy and sex respectively, while the neurotic group received a rank-order of abasement, nurturance, achievement and affiliation. The three weakest needs for the neurotic group are aggression,

sex and succorance, while the normal group yields deference, succorance and aggression respectively.

The projective method of assessment yields a picture of greater agreement between the normal and neurotic group in the rank ordering of needs than does the indirect method. The three strongest needs measured by the Thematic Apperception Test for the normal group are aggression, succorance, and achievement respectively, while the neurotic group yields succorance, abasement and aggression respectively. The three weakest needs for both groups are dominance, affiliation and deference respectively. The high strength of need abasement which is defined as the need to feel guilty when one has done wrong, as well as the need to accept blame and to feel timid and inferior, for the neurotic subjects on the indirect and projective methods of assessment may well be the result of the greater proportion of depressive patients in the neurotic sample.

If one views the projective techniques as tapping a deeper level of motivation it is interesting to note the relative strength of aggression and succorance for both the normal and neurotic subjects. Both needs are apparently operating at deeper levels yet neither is readily admitted to on the conscious level. On the direct method, one finds the socially desirable needs of achievement and autonomy in rank-order position one and two. The contrast is striking.

If one views these two sets of four needs as poles along a conscious-unconscious continuum one obtains a picture of man who consciously views himself as an independent achiever but who unconsciously has strong needs which are really polar elements in a continuum themselves. The succorance-aggression dimension could be conceived as reflecting variations in degrees of the needs to love and hate. Freud² has alluded to these dimensions in his writings. He has delineated a love-hate, sex-aggression, libido-mortido, or Eros-Thanatos polarity which is comparable to the succorance-aggression dimension yielded by the projective technique. The most interesting aspect of the comparison is the similarity of need strength on the two methods for both of the groups. This could be accounted for in terms of cultural conditioning in a society which places strong emphasis on individuality and achievement perhaps to the detriment of the more basic needs of love.

On a purely inspectional basis, a study of Table II seems to reveal a pattern of inconsistency for both groups on the three methods of assessment, but it should be noted that some need rank-order placements are more consistent for one of the groups than they are for the other, and in some cases there is more consistency between two of the

² T. Leary, Interpersonal Diagnosis of Personality, New York, Ronald Press, 1957, p. 71-72.

methods on certain needs than on the other method. The analyses that follow should help to elucidate these comparisons and give an indication as to whether observed differences and similarities are simply due to chance occurrence or whether they are real differences.

The next phase of the statistical analyses will concentrate on the major hypotheses of the present study and will involve a detailed analysis of the differences existing between the two groups with respect to their discrepancy scores on the different method comparisons and also the degree of congruence existing within the groups separately with regards to the method comparisons.

3. Global Discrepancy Score Comparisons Between Groups.

The first aspect of the statistical analysis bearing on the major hypotheses of the study involves an analysis of the differences between the normal and neurotic groups with respect to their global discrepancy scores on each of the three methods of assessment. This aspect of the statistical analysis is pertinent to the first three hypotheses stated in chapter two.

The global discrepancy scores of each group were arrived at by computing the difference between the rank-orders for each individual in each group for each of the ten

variables on the following methods of assessment: direct versus indirect; direct versus projective; and indirect versus projective. Each individual in the study had a total of three global discrepancy scores reflecting the particular method comparison mentioned above. The discrepancy scores pertinent to the particular analysis being undertaken were placed in a combined rank-order. The Mann-Whitney U Test was computed to test for the significance of difference between the distributions of the normal and neurotic groups with regard to their discrepancy scores. The data is presented in Table III.

The results of the Mann-Whitney z Test indicate that the medians of the neurotic group on the global discrepancy score were significantly higher than the medians of the normal group on the direct versus indirect and direct versus projective dimensions of the analysis. The difference between the medians of both groups were found to be significant at the .0006 and .0272 levels of confidence respectively.

Table III also reveals that the null hypothesis stating that there will be no difference between the normal and neurotic subjects with regards to their discrepancy score on the indirect versus projective dimension cannot be rejected since no significant difference was found. This non-significant difference on the indirect versus projective dimension seems to substantiate Davids' position that the

Table III.-

Mann-Whitney z Test of Distribution of Discrepancy Scores
Between Normal and Neurotic Subjects
(N = Normals:60, Neurotics:30).

Discrepancy Scores	Stat.	Group		Diff.	z	Signif.
		Normal	Neurotic			
Direct vs. Indirect	Mdn.	21.5	27.5	6.0	3.42	.0006
Direct vs. Projective	Mdn.	31.0	35.5	4.5	2.21	.0272
Indirect vs. Projective	Mdn.	31.5	33.5	2.0	.62	-

indirect dimension is measuring something other than what the direct method is measuring and is a worthwhile addition to the classification of methods. It also suggests that the indirect approach is more similar to the projective assessment techniques than to the direct method.

Generally, these findings support Allport's theoretical position regarding the response discrepancy of normal and neurotic subjects on various methods of assessment. One may infer that the normal subjects used in this study were more congruent with regard to their overall responses on the direct and indirect, as well as their direct and projective measure of needs, than were the neurotic subjects. While this is an important finding and tends to partially substantiate Allport's contention regarding the response discrepancy of normal and neurotic adults on various methods of motivational assessment, it does not give a very clear picture. The global discrepancy scores tend to mask the specific differences of the group that do occur when each need is viewed separately. The global discrepancy score does not tell us how the two groups differ with respect to their discrepancy score for each of the ten needs. It does not tell us if the neurotics differ significantly from the normal subjects with regard to their discrepancy scores on all of the needs, some of the needs, or none of the needs. This is why a specific analysis involving a comparison of

discrepancy scores for each of the ten needs was conducted. This more refined aspect of analysis has been excluded in the other major studies which tested Allport's hypothesis and this omission is cited in the review of the literature as a weakness of these studies. In particular Davids,³ Davids and Pildner,⁴ Getzel,⁵ and Keating's⁶ research could be criticized on this basis.

4. Discrepancy Score Comparisons Between Groups for Each of the Ten Needs.

The second aspect of the statistical analysis is also related to the first three null hypotheses stated on page forty-five. As mentioned above, this will involve

3 Anthony Davids, "A Comparison of Three Methods of Personality Assessment: Direct, Indirect and Projective Techniques", in the Journal of Personality, Vol. 23, No. 4, June 1955, p. 423-440.

4 Anthony Davids and Henry Pildner, "Comparison of Direct and Projective Methods of Personality Assessment Under Different Conditions of Motivation", in Psychological Monographs, Vol. 72, No. 11, Whole No. 464, 1958, p. 1-30.

5 J.W. Getzel, "Assessment of Personality and Prejudice by the Methods of Paired Direct and Projective questionnaires", unpublished thesis, Harvard, 1951, as quoted by Gordon Allport, "The Trend in Motivational Theory", in the American Journal of Orthopsychiatry, Vol. 23, No. 1, January 1953, p. 107-119.

6 Arthur Keating, "Self-Referent Versus Other-Referent Incomplete Sentences in Projection", unpublished Master's thesis, presented to the School of Psychology and Education at the University of Ottawa, 1960, ix-130 p.

a comparison of the difference between the normal and neurotic subjects with regards to their discrepancy scores for each of the ten variables being studied. To test these hypotheses, the median test was performed on the combined discrepancy scores of the two groups and the results may be seen in Table IV.

The results of the chi square test of significance indicates that significant differences between the groups with regard to their discrepancy scores were at a minimum. Six out of the possible thirty differences were found to be significant at the .05 level of confidence or beyond. Three of the chi square tests revealed significance at the .01 level of confidence.

The 2 x 2 contingency tables for the six differences which were found to be significant may be seen in Table V.

Table IV presents a summary of the chi square test of significance for each of the ten needs for all three discrepancy score comparisons. The chi square values which are beyond the accepted level of confidence will now be evaluated.

a) Direct versus Indirect.- Significant differences between the normal and neurotic subjects with regard to discrepancy scores were found at the .01 level of confidence for need abasement and need deference. The 2 x 2 contingency

Table IV.-

Chi Square Values for the Comparison of the Two Groups With
Respect to Discrepancy Scores.

Variable	Discrepancy Scores					
	Direct vs. Indirect		Direct vs. Projective		Indirect vs. Projective	
	Chi Square Value	Signif.	Chi Square Value	Signif.	Chi Square Value	Signif.
Achievement	1.25	-	.45	-	.45	-
Abasement	8.45	.01	8.45	.01	2.17	-
Affiliation	2.17	-	2.17	-	.05	-
Aggression	.05	-	.45	-	.05	-
Autonomy	.45	-	1.25	-	.45	-
Deference	8.45	.01	6.05	.02	.45	-
Dominance	2.17	-	2.17	-	2.17	-
Nurturance	.05	-	1.25	-	.05	-
Sex	.05	-	2.17	-	4.05	.05
Succorance	1.25	-	4.05	.05	1.25	-

Table V.-

2 x 2 Contingency Tables for Chi Square Values of Discrepancy Scores Found to Reveal a Significant Difference Between the Normal and Neurotic Subjects.

	Normals	Neurotics	Total
Direct versus Indirect			
Need: Abasement			
Discrepancy scores above combined median	23	22	45
Discrepancy scores below combined median	37	8	45
Total	60	30	90
Need: Deference			
Discrepancy scores above combined median	23	22	45
Discrepancy scores below combined median	37	8	45
Total	60	30	90
Direct versus Projective			
Need: Abasement			
Discrepancy scores above combined median	23	22	45
Discrepancy scores below combined median	37	8	45
Total	60	30	90
Need: Deference			
Discrepancy scores above combined median	24	21	45
Discrepancy scores below combined median	36	9	45
Total	60	30	90

Table V.- (Cont'd.)

2 x 2 Contingency Tables for Chi Square Values of Discrepancy Scores Found to Reveal a Significant Difference Between the Normal and Neurotic Subjects.

	Normals	Neurotics	Total
Direct versus Projective (Cont'd.)			
Need: Succorance			
Discrepancy scores above combined median	25	20	45
Discrepancy scores below combined median	35	10	45
Total	60	30	90
Indirect versus Projective			
Need: Sex			
Discrepancy scores above combined median	25	20	45
Discrepancy scores below combined median	35	10	45
Total	60	30	90

table of Table V reveals the number of discrepancy scores in the two groups falling above and below the combined median.

b) Direct versus Projective.- Significant differences between normal and neurotic subjects with regard to discrepancy scores were found at the .01, .02, and .05 levels of confidence respectively, for needs assessment, deference, and succorance. Table V indicates the number of cases above and below the combined median for both groups.

c) Indirect versus Projective.- A significant difference between normal and neurotic subjects with regard to their discrepancy scores was found at the .05 level of confidence for need sex. The 2 x 2 contingency table may be seen in Table V.

We may infer from the statistical findings which revealed significant differences at acceptable levels of confidence that normal subjects have significantly lower discrepancy scores on the above-mentioned needs. Again we find that this evidence tends to lend support for Gordon Allport's contention that the normal adult will be more congruent on various methods of assessment which purport to tap different levels than will the neurotic.

While significant differences between the two groups were significant only on six discrepancy scores the particular needs involved may suggest the need areas that the neurotic subjects, at least when compared with the normal

subjects, are least aware of and perhaps most defensive about. The fact that the neurotics had significantly higher discrepancy scores than the normals on both the direct versus indirect methods, and the direct versus projective methods for needs abasement and deference suggests that these two needs in particular were areas of conflict for the neurotic subjects in the present study. The caution referring to the larger proportion of neurotic depressives in the neurotic sample should again be recalled.

The neurotic subjects' greater number of discrepancy scores above the median on the direct versus projective comparison for need succorance and the significantly greater number of discrepancy scores above the median on the indirect versus projective dimension for need sex also leads one to infer a lack of awareness of the motivational strength of these needs in the personality make-up of the neurotic subjects, at least when compared with the normal subjects.

The definitions of the needs in question indicate that the neurotic subjects have less awareness of the relative strength of their need to feel guilty for wrong doings, to conform to the expectations of others, to seek love and sympathy, and their sexual needs than do the normal subjects.

Unfortunately, the discrepancy scores themselves for the particular needs does not tell the reader the direction of the difference between method comparisons, i.e., it does not tell us, for example, whether the neurotics tended to under- or over-estimate the relative strength of need abasement on the direct in contrast to the projective or vice versa. It only reveals that the discrepancy is greater for the neurotic subjects. The next aspect of the statistical analysis will shed some light on this question whenever significant differences are found between method comparisons within the groups.

5. Within Group Comparisons.

The fourth hypothesis states that there is no significant difference between the rank-order placement of the direct, indirect and projective methods of need assessment for the normal adults with regard to each of the ten needs. Hypothesis five states that there is no significant difference between the rank-order placement of the direct, indirect, and projective methods of need assessment for the neurotic adults with regard to each of the ten needs. To test these hypotheses, the Wilcoxon matched-pairs signed-ranks test was performed to determine the differences between the rank orders of the ten needs. The sign of the computed Wilcoxon z values will give an indication as to how the

rank-order placement differs from method to method. A negative sign before a significant Wilcoxon z indicates that the rank-order placement of the group for the particular need was significantly lower on the first method of assessment listed than on the second method listed. A positive sign before a significant Wilcoxon z indicates that the rank-order placement of the group for the particular need was significantly higher on the first method of assessment listed than on the second.

It will be recalled that a rank of one indicates the need measured as having the greatest relative strength. Consequently the term lower as used in the above context means having a higher score or greater need strength. The summary of results are shown in Table VI for the normal subjects and Table VII for the neurotic subjects.

Table VI indicates that thirteen of the thirty Wilcoxon z values did not reach a significant level of confidence. Consequently, the general null hypothesis that no significant difference between the direct, indirect and projective methods of need assessment for the normal adults with regards to the ten needs cannot be rejected in these cases. We can then infer that in these thirteen comparisons the normal adults were congruent on the particular method comparisons.

Table VI.-
 Wilcoxon z Test for Differences Within Matched Pairs of
 Three Methods of Assessment for Normal Subjects
 With Regards to Ten Needs.

Variable	Direct vs. Indirect			Direct vs. Projective			Indirect vs. Projective		
	N	Wilcoxon z	Signif.	N	Wilcoxon z	Signif.	N	Wilcoxon z	Signif.
Achievement	50	-5.09	.0001	53	-4.43	.0001	51	.11	-
Abasement	54	5.63	.0001	56	3.6	.0001	56	.008	-
Affiliation	55	-3.71	.0001	57	-5.7	.0001	57	-3.81	.0001
Aggression	52	5.32	.0001	60	6.42	.0001	53	3.27	.0001
Autonomy	52	4.50	.0001	55	5.1	.0001	57	1.75	-
Deference	53	1.91	-	53	.05	-	55	.288	-
Dominance	53	1.85	-	60	.56	-	58	-5.88	.0001
Nurturance	53	2.31	.02	56	.05	-	57	2.97	.003
Sex	52	1.48	-	53	1.21	-	52	1.90	-
Succorance	54	1.49	-	58	4.1	.0001	59	4.3	.0001

PRESENTATION OF RESULTS AND DISCUSSION

Table VII.-

Wilcoxon z Test for Differences Within Matched Pairs of
Three Methods of Assessment for Neurotic Subjects
With Regards to Ten Needs.

Variable	Direct vs. Indirect			Direct vs. Projective			Indirect vs. Projective		
	N	Wilcoxon z	Signif.	N	Wilcoxon z	Signif.	N	Wilcoxon z	Signif.
Achievement	27	-2.77	.005	29	-3.03	.002	29	-1.42	-
Abasement	29	4.60	.0001	29	3.9	.0001	29	-2.32	.02
Affiliation	28	-.54	-	30	-3.8	.0001	27	-3.14	.006
Aggression	26	1.71	-	28	3.3	.001	30	2.96	.003
Autonomy	29	-3.21	.001	30	-2.57	.02	30	.75	-
Deference	28	.635	-	28	.46	-	28	1.00	-
Dominance	29	.680	-	30	1.81	-	29	1.87	-
Nurturance	27	2.22	.02	30	.086	-	28	1.65	-
Sex	28	1.28	-	28	.752	-	29	1.61	-
Succorance	29	-2.04	.04	29	3.1	.002	29	3.52	.006

PRESENTATION OF RESULTS AND DISCUSSION

The majority of method comparisons for particular needs yielded significant differences of rank-order position at acceptable levels of confidence. It is of importance to note that for needs achievement, abasement, affiliation, aggression and autonomy significant differences of rank-order position at acceptable levels were found for both the direct and indirect comparison as well as the direct and projective comparison. Significant differences on need nurturance for the direct versus indirect comparison and need succorance for the direct versus projective comparison were the only basic variations among these dimensions of the two method comparisons.

The signs of the Wilcoxon z's for need achievement and affiliation were negative on both the direct and indirect comparison as well as the direct and projective comparison. This indicates that the normal subjects estimate greater need strength on the Self-Ranking Need Sheet than is yielded by either the Edwards Personal Preference Schedule or the Thematic Apperception Test. They also tend to estimate a lesser degree of need strength on the Self-Ranking Need Sheet for need abasement, aggression, autonomy, and nurturance than is yielded by either the indirect or projective method of assessment. The normal subjects also tend to give higher rank value to succorance on the direct method than is yielded

by the projective and a higher rank to deference on the direct than is yielded by the indirect measure.

Table VI also indicates that the consistency of significant differences of rank-order placement that were found on the direct and indirect as well as the direct and projective comparison seems to partially disappear on the indirect versus projective comparison. This comparison reveals that significant differences of rank-order position at acceptable levels of confidence were found for needs affiliation, aggression, nurturance, sex and succorance. This finding seems to suggest that the Edwards Personal Preference Schedule is measuring something other than what the direct method is measuring and yet is not yielding the same results as the projective measure but the estimate is much closer to the projective end of the continuum than the direct end. This finding again tends to substantiate Davids' argument for the inclusion of an indirect method as distinct from the direct method.

From the vantage point of Allport's theoretical position concerning the congruence of normal adults on the various methods of assessment we may conclude that while his major hypothesis is supported it depends to a great extent on the variables in question. Allport's comment: "The normal subjects, on the other hand tell you by the direct method precisely what they tell you by the projective

methods",⁷ seems to need modification in light of the present findings.

At first glance, this quotation makes Allport's contention regarding the normal adult seem oversimplified, although in another context in a discussion of consciousness, he speaks of various strata that exist in personality structure.⁸ It is in this context that he makes it clear that not all of the motives of the normal individual will be equally conscious. The central region of deeper motives (preprimum) is sometimes conscious and sometimes unconscious. This fact may partially account for the fairly large number of significant differences in the rank-order position of needs in the method-comparisons of the normal subjects. This finding also tends to reinforce the idea that it is the particular needs in question rather than the global discrepancy score that is the most important aspect of the analysis.

Table VII reveals that fifteen of the thirty Wilcoxon z values did not reach an acceptable level of confidence. Consequently, the general null hypothesis that no significant difference between the rank-order positions of the direct,

7 G. Allport, "The Trend in Motivational Theory", in the Journal of Orthopsychiatry, Vol. 23, No. 1, January 1953, p. 107-119.

8 -----, Pattern and Growth in Personality, New York, Holt, Rinehart and Winston, 1961, p. 141-143.

indirect and projective methods of need assessment for the neurotic subjects with regards to the ten needs cannot be rejected in these cases. We may conclude that in these fifteen cases the neurotic subjects showed congruence for the particular method comparisons. The fact that fifteen of the Wilcoxon z values did not reveal a significant difference for the neurotics in contrast to the thirteen Wilcoxon z values of the normals also tends to support the position previously mentioned regarding the global discrepancy score, that is it tends to obscure the data. It should also be noted that the needs for which significant differences in rank-order placement were found for each of the method-comparisons and the direction of the change from method to method varies somewhat for each group. A discussion of these significant differences of rank-order placement with special emphasis on the direction of change from method to method will follow.

Table VII indicates that significant differences in rank-order placement at acceptable levels of confidence were found for needs achievement, abasement, autonomy, nurturance, and succorance on the direct and indirect comparison. The signs of the Wilcoxon z values for needs achievement, affiliation, autonomy and succorance were negative indicating that the neurotic subjects tend to estimate greater need strength on the Self-Ranking Need Sheet than is measured by the

Edwards Personal Preference Schedule while abasement and nurturance are seen as having less need strength on the direct method than on the indirect. It should be noted that for this method comparison need autonomy proceeds in opposite directions for the two groups. The neurotic subjects estimated a greater need strength for this need on the direct than was yielded by the indirect while the normals estimated less need strength for autonomy on the direct than on the indirect measure. This implies that the neurotic subjects consciously ascribe to feelings of independence but in a more disguised measure reveal a lesser degree of it, perhaps pointing to deeper level feelings of dependency.

On the direct versus projective method comparison, we find significant differences at acceptable levels of confidence for needs achievement, abasement, affiliation, aggression, autonomy and succorance. Since this method comparison most directly tests Gordon Allport's hypothesis of lack of congruence for neurotics, it should be noted that the largest proportion of significant differences were found on this method comparison.

The negative z values found on needs achievement, affiliation and autonomy indicate that the neurotic subjects used in this study tended to estimate greater need strength for these needs on the direct method than on the projective method. The normals, as will be recalled from Table VI,

tended to estimate a lesser degree of need strength on need autonomy on the direct method than on the projective. The interpretation suggested above for this difference in change of direction for the two groups may be applied again and tends to substantiate the former. While significant differences of rank-order position are found for both groups on this need at times they proceed in opposite directions of estimation.

The positive z value signs on abasement, aggression and succorance indicate that neurotic subjects tend to estimate these needs as having less strength in their personality make-up on the direct method than the projective measure indicates.

The indirect versus projective comparison reveals significant differences on needs abasement, affiliation, aggression and succorance. Abasement and affiliation yield negative Wilcoxon z value signs while aggression and succorance yield positive signs. The direction of change in this method comparison is similar to the normal subjects for those needs on which both revealed significant differences.

In comparing Tables VI and VII we find both similarities and differences in terms of needs which reveal significant differences in rank-order placement for the different method comparisons as well as similarities and differences in terms of the change of direction of estimated need

strength from method to method between the two groups. This finding also points to the necessity of the consideration of specific variables.

6. Discussion.

As will be recalled, the main problem of this study was to investigate Gordon Allport's theoretical contention regarding the response discrepancy of normal and neurotic subjects on different methods of assessment. Allport hypothesizes that the normal adult will reveal a greater degree of congruence existing between his responses to direct, indirect and projective methods of assessment than will the neurotic who is portrayed as more defensive and less aware of the motivational forces in his personality make-up. Since Allport refers to motivational forces the areas of need assessment was selected for the present study.

To the extent that generalizations can be made to the populations from which the present samples were drawn, it could be concluded that the results of the present study tend to support Allport's position, but with important qualifications. Allport's contention is tenable but it depends to a great extent on the needs in question. The statistical analysis indicated that null hypotheses I and II cannot be accepted regarding the global discrepancy scores, but that null hypothesis III is accepted. In the specific analysis

of the discrepancy scores on each of the ten needs for the two groups the neurotic subjects were again found to have significantly greater discrepancy scores on six of the thirty comparisons made. The results were as follows:

(1) the discrepancy scores for needs abasement and deference were found to be greater for the neurotics than the normals on the direct-indirect dimension; (2) the discrepancy scores for needs abasement, deference and sex were found to be significantly greater for the neurotics than the normals on the direct-projective dimension; and (3) the discrepancy score for need sex was found to be significantly greater for the neurotics than the normals on the indirect-projective dimension. The within group comparisons which tested null hypotheses IV and V revealed seventeen significant differences out of thirty possibles for the normal subjects and fifteen significant differences out of thirty for the neurotic subjects. The specific needs found to yield significant differences on the various method comparisons varied in the two groups as did the change of measured need strength from method to method.

In summary the statistical findings revealed two important elements: (1) the neurotic subject's discrepancy scores were both globally and specifically greater than the normal subject's; (2) the normal subjects were far from perfectly consistent in their responses to the three methods of

assessment and the within group comparisons revealed slightly less non-significant differences for the normal subjects than for the neurotics.

In view of these findings one might conclude that Allport's theoretical note regarding the response discrepancy of normal and neurotic subjects is much more complex than his basic idea implies. The results indicate that it is not enough to indicate that a greater discrepancy exists between the normal and neurotic adults, it seems that one must specify the particular variables in question and the direction of the change from method to method. Global discrepancy scores which have been used in the majority of previous studies tend to obscure the more meaningful aspects of the comparison between the two groups on various assessment techniques.

The results indicate that there is a great deal of overlap between the two groups as to which needs they perform more consistently on as well as differences. At the same time, there are also distinct similarities and differences between the groups in terms of the direction of change per need from method to method. To explain both the overlapping performance and the differences existing in the two groups would seem to be the next phase of a research aimed at a fuller understanding of the response discrepancy of normal and neurotic adults. The present research has arrived at a

point at which Allport's hypothesis has been qualified to the level of specific needs. One is now faced with the complex problem of understanding the various needs, need constellations, and changes in direction from method to method which revealed significant differences both between and within groups. Perhaps, the needs as designated are too global to provide this understanding. If this is the case, the next phase of research along these lines would seem to indicate the submission of the relevant needs of the two groups to a factor analytic study in the hope of gleaning common factors.

It seems reasonable to conclude from the statistical findings that personality assessment must be based on both direct, indirect, and projective measurement if maximum validity is to be attained. Projective assessment methods are able to reveal critical areas of personality which often are hidden by both the direct and indirect measures. These areas most probably correspond to the deeper, more central motives of the proprium discussed by Allport.

In response to direct methods, the normal individual may accurately describe conscious personality traits or motives but only vaguely suggest pertinent deeper level functioning. While the surface traits and motives may certainly reflect the dynamic motivational make-up of the individual, it seems that the two components of behavior are distinguishable and may co-exist at varying degrees of

integration. The psychotic many times reveals a complete separation of the conscious and unconscious levels while the normal, healthy individual achieves an integrated relationship which permits effective behavior. Yet, even with the normal individual enough of a discrepancy exists between the two levels to make necessary the use of projective techniques. It seems that projective techniques can contribute a great deal more to the study of the normal individual than Allport seems willing to admit and should not be restricted to the study of the disturbed individual.

The fact that the normal subjects are far from perfectly congruent in their responses to the various methods of assessment must be explained. One possible explanation could be the basic motivational complexity existing in the normal personality. This implies that the material from various assessment techniques purporting to measure different levels of behavior should not be artificially separated or treated as the same, but that the various methods should be utilized as though they were interacting factors. It is important that the projective material be evaluated in comparison with information gained from the direct and indirect methods and vice versa. In this way, a more meaningful analysis of the data may be obtained.

In a consideration of both the direct and projective measures of behavior, the diagnostician is in a better

position to observe the interplay between the two levels. Only by considering the conscious level of behavior in relation to the material yielded by the projective instruments and by observing the defenses, compensations, directions of motivational energy and other adaptive mechanisms involved in the interplay between the two levels can any systematic knowledge about the unity and integration of personality be gained. Anthony Davids and Henry Pildner comment:

While projective and direct personality appraisal may yield different quantitative results, these results may actually contribute to the formation of an accurate qualitative personality appraisal. Direct and projective assessment methods do elicit material representative of different levels of behavior and the relative psychodiagnostic value of this information must be recognized.⁹

It should be noted also that the measure of needs by the three different assessment methods of the present study is a rather static approach to the appraisal of personality. The personality structure of the normal individual seems to include a number of motivational patterns intimately bound together. For example, unconscious aggressive needs may be closely tied to the need to be deferent or sexual needs. The conscious need for succorance may be associated with unconscious feelings of guilt. The present study only indicates the relative strength of needs not their interrelationships.

⁹ Davids and Pildner, Op. Cit., p. 25.

By contrasting the motivational patterns of the normal and neurotic adult we may obtain further insight into some of the possible reasons behind the fairly high degree of response inconsistency that was found for the normal subjects. The motivational complexity of the normal individual has been discussed above. If this is the case, then it is quite possible that for the normal individual no one strong need will dominate behavior and one will find a harmonious integration of many motives interacting at different levels. Given this hypothesis, the assessment of the normal individual's motivational pattern becomes an extremely complex task for which all assessment aids should be utilized.

On the other hand, many theorists like Kubie,¹⁰ Horney,¹¹ and White¹² in their attempts to explain the dynamics of the neurotic's motivational pattern point to fixation at an earlier developmental level and the consequent over-driven strivings which result. This singularity of drive may account for the predominance of one trend of behavior or need to the exclusion of others. One is reminded of

10 L.S. Kubie, "The Fundamental Nature of the Distinction Between Normality and Neuroses", in the Psychoanalytic Quarterly, Vol. 23, No. 4, September 1954, p. 167-204.

11 Karen Horney, Our Inner Conflicts: A Constructive Theory of Neurosis, New York, W.W. Merton and Co., 1945, CC 2-5.

12 Robert W. White, The Abnormal Personality, New York, The Ronald Press Co., 1956, p. 242-249.

Horney's neurotic who predominantly moves towards, away or against people in his struggle to overcome basic anxiety. As the one dominant trend develops to the exclusion of the other two possibilities a corollary set of needs which are both indiscriminate and insatiable in their intensity mark the individual for they become overdriven. Consequently, specific needs with greater than usual intensity may dominate both levels of the neurotic's functioning and the diagnostician may obtain more consistency on certain needs for the neurotic on the direct and projective measures than is obtained for the more complexly integrated normal adult. If this idea has validity, then one would expect to find the normal individual's motivational pattern freer of dominant trends and consequently more difficult to assess. This reasoning may help to explain the slightly greater congruence found in the neurotic subjects in the within method comparisons.

The unexpectedly high degree of inconsistency found in the test performances of the normal subjects also brings to mind Joseph Nuttin's¹³ concept of psychic intimacy. Nuttin suggests that rather than falling back on the unconscious, which consists largely of unacceptable repressed

¹³ Joseph Nuttin, Psychoanalysis and Personality- A Dynamic Theory of Normal Personality, New York, Sheed and Ward, 1955, p. 191-201.

contents, the idea of psychic intimacy should be introduced to explain the dynamics of the normal individual. In summary, the idea of psychic intimacy refers to that area of psychic content "to which certain dynamic contents which do not agree with the social or constructive form of the personality are relegated".¹⁴ The contents which belong to the intimate level of psychic life does not necessarily coincide with the image or persona which the process of socialization has developed in us through our contact with others. This is usually a conscious area of personality but not public. The healthy well balanced individual develops and integrates both spheres of his personality, that is, the public or social and the deeper more intimate. On the other hand, the maladjusted individual is more defensive about his intimate self and less integrated.

Nuttin proceeds on to say that in the process of socialization some of the contents of the intimate sphere, because they are not in accord with constructive development, gradually atrophy and the tension between the two spheres decreases. To atrophy does not imply non-existence but only absence in overt behavior. The absence is due to the fact that these psychic contents do not fit in with the "explicit constructive image which the person is tending to realize

¹⁴ Nuttin, Op. Cit., p. 192.

within himself".¹⁵ If this suggestion has validity then it is conceivable that the lack of congruence found for the normal subjects reflects the discrepancy between the public and intimate levels of personality and the lack of congruence itself as revealed by the various assessment methods may not necessarily imply a lack of integration or lack of awareness of these two levels but only indicate that they do exist. If this is the case, it would imply that measures of anxiety or tension would be necessary as well as the direct, indirect, and projective measures in order to determine the degree of tension or anxiety resulting from the lack of congruence. Otherwise, one can only say that there is a lack of congruence which in itself can have a variety of meanings. The results on the three different methods of assessment with normal and neurotic subjects dichotomized in terms of high and low anxiety levels would be a worthwhile extension of the present study.

7. Limitation of the Present Study.

The generalizations of the present study are restricted not only by the size of the sample used, but also by the composition of the two groups. It will be recalled that the neurotic group was composed of thirty subjects

15 Nuttin, Op. Cit., p. 196.

divided into the following sub-categories: sixteen neurotic depressive reactions, eleven anxiety reactions, and three obsessive-compulsive reactions. Considering the other dimensions of neuroses it becomes apparent that this is not an equally balanced sample and consequently this fact must be taken into account in both the interpretation and the generalizations of the present study. The normal subjects consisted of a relatively heterogeneous group of adults in Adult Evening Extension programs. While the screening of the subjects with the Minnesota Multiphasic Personality Inventory gives some assurance that the groups do not yield a profile similar to the typical neurotic, it should be remembered that this is a far from perfect screening instrument. The generalizations are of course also restricted to male adults since females were not included in the present study.

While some attempt was made in the selection of the Thematic Apperception Cards to take into account the stimulus pull of the individual cards it was by no means rigorously approached. The existing research on the stimulus pull of the cards does not allow for the type of rigor that would permit weighting of individual cards since most of the available research deals with themes and content areas rather than needs as such. This was also true of Eron's research which seemed to be one of the most comprehensive

existing. To approach this problem rigorously would have involved a separate study. It is quite possible that the frequency and intensity scores for both the normals and neurotic subjects on the Thematic Apperception Test were affected somewhat by the cards themselves, although the fact that both groups were exposed to the same cards seems to introduce the necessary balancing factor for the present study.

One final comment concerning the limitations of the present study, in this cursory rather than exhaustive expose, concerns the use of nonparametric statistics. The author feels that more information could have been obtained from the data had the use of parametric statistics been possible. It is quite possible that the conversion of scores into ranks could have obscured some significant differences in the various method comparisons.

Before proceeding with a replication or further study in this area these challenging problems should be considered.

B. Suggestions for Further Research.

As previously noted, the present research has reached a point of extension and modification of Allport's hypotheses concerning the response discrepancy of normal and neurotic subjects to direct, indirect and projective methods

of need assessment. The present research has qualified Allport's theory at the level of specific needs indicating that the concepts of discrepancy and congruence are relative terms whose meaning depends on the particular needs in question and the direction of change from method to method. Arrival at this point suggests certain research questions in the area of the needs themselves which seem worthy of investigation.

1. What common factors exist, if any, for those needs which yielded significant differences in the within methods comparison of the normal subjects?

2. What common factors exist, if any, for those needs which yielded non-significant differences in the within methods comparison of the normal subjects?

3. What common factors exist, if any, for those needs which yielded significant differences in the within methods comparison of the neurotic subjects?

4. What common factors exist, if any, for those needs which yielded non-significant differences in the within methods comparison of the neurotic subjects?

Study along these lines would reduce the complexity of the variables and perhaps give some insight into the motivational patterns of normal and neurotic adults at both the conscious level of awareness and at the deeper levels.

The fact that the present sample consisted of out-patient neurotics who were voluntarily seeking help may have influenced the results. The pertinent question arises as to whether the results would have been the same if neurotics not seeking aid had been used. Is there a difference in levels of awareness between the two groups? An investigation aimed at comparing the response discrepancy of normals and a dichotomized group of neurotics might indicate a much different picture and it seems as though it would be a worthwhile project for future investigation.

Another research problem that the present study promotes concerns the testing of Allport's hypothesis utilizing other variables. A continuing series of investigations in this area including and manipulating more and more variables which seem pertinent would gradually lead to a better understanding of the motivational patterns of normal and neurotic adults. The entire problem of the basic differences and similarities between normal and neurotic subjects needs more extensive research. For example, the discussion of Nuttin's concept of psychic intimacy was interpreted as suggesting that the crucial question may not be the presence or absence of congruence as such but the tension or anxiety that accompanies the lack of congruence. It would be interesting to test Allport's theoretical contention using a group of normal subjects who had been dichotomized into a low and

high anxiety group and a group of neurotic subjects dichotomized on the same variable.

The area of expressive movements could also be utilized to test and extend Allport's hypothesis. People develop highly characteristic styles of writing, talking, walking, sitting and gesturing. Usually, these expressive movements are highly consistent over time. The research question pertinent to Allport's hypothesis might be: Are there significant differences between normal and neurotic subjects when expressive measures and direct measures of the same variables are compared?

In addition to the above suggestions, it would seem that the interpretations given, the theoretical framework provided and the other theoretical orientations discussed, as well as the results of the study would provide enough latitude for any number of additional hypotheses.

SUMMARY AND CONCLUSIONS

The purpose of the present research was to investigate the relative performance on direct, indirect, and projective personality assessment measures by normal and neurotic adults. A primary objective was the empirical evaluation of Gordon Allport's theoretical notion of the difference in response discrepancy between normal and neurotic adults to direct and projective methods of assessment.

A survey of the relevant literature revealed that very few studies have compared the performance of both normal and neurotic subjects on direct, indirect, and projective measures which were explicitly designed to focus on specifically defined variables that were motivational by nature.

Two groups of subjects matched for age and educational level were employed. The groups consisted of sixty adult evening college students and thirty psychiatrically diagnosed neurotics receiving treatment at outpatient clinics. A Self-Ranking Need Sheet, the Edwards Personal Preference Schedule and ten cards of the Thematic Apperception Test purporting to measure ten needs were administered to the two groups. These three instruments measured the needs of achievement, abasement, affiliation, aggression, autonomy, deference, dominance, nurturance, sex, and succorance. The reliability of all three instruments and the inter-scorer

reliability was found to be acceptable for the research purposes of this study. The five major statistical hypotheses tested by the present study were as follows:

- I. There are no significant differences between normal and neurotic adults with regard to their discrepancy scores on direct versus indirect methods of need assessment.
- II. There are no significant differences between normal and neurotic adults with regard to their discrepancy scores on direct versus projective methods of need assessment.
- III. There are no significant differences between normal and neurotic adults with regard to their discrepancy scores on indirect versus projective methods of need assessment.
- IV. There are no significant differences between the rank-order positions of direct, indirect and projective methods of need assessment for the normal adults with regard to each of the ten needs.
- V. There are no significant differences between the rank-order positions of direct, indirect and projective methods of need assessment for the neurotic adults with regard to each of the ten needs.

In general the statistical findings tended to support Allport's contention but with important qualifications. The comparison of the global discrepancy scores of the two groups confirmed Allport's position regarding the phenomenon of wider discrepancy for neurotic subjects on the direct versus indirect dimension and the direct versus projective dimension. Null hypotheses III could not be rejected. In the specific analysis of the discrepancy scores on each of the ten needs

for the two groups, the neurotic subjects were again found to have significantly greater discrepancy scores on six of the thirty comparisons made. This finding was also taken as evidence in support of Allport's hypothesis of wider discrepancy for the neurotic subjects than for the normals and it was noted that the global discrepancy scores produced a masking effect. It was suggested that a meaningful interpretation of the data as related to Allport's contention demanded a specific analysis of the variables in question. Significantly greater discrepancy scores for the neurotic subjects were found on the following needs and method comparisons: (1) the discrepancy scores for needs abasement and deference were found to be greater for the neurotics than the normals on the direct-indirect dimension; (2) the discrepancy scores for needs abasement, deference and sex were found to be significantly greater for the neurotics than the normals on the direct-projective dimension; and (3) the discrepancy score for need sex was found to be significantly greater for the neurotics than the normals on the indirect-projective dimension.

The statistical findings pertinent to null hypotheses IV and V revealed seventeen significant differences out of thirty possibles for the normal subjects and fifteen significant differences out of thirty possibles for the neurotic subjects. Similarities and differences were found between

the two groups in terms of the specific needs found to yield significant differences on the various method comparisons as well as the change of rank-order need strength from method to method.

Two main conclusions may be drawn from the present research. First, the neurotic subjects' discrepancy scores were both globally and specifically greater than the normal subjects'. Second, the normal subjects were far from perfectly consistent on the various method comparisons and in fact showed slightly less congruence than did the neurotic subjects. Explanations were attempted for each of these conclusions.

It was also suggested that for a maximally accurate personality assessment all three methods should be utilized since they seem to tap three different levels of functioning.

It was suggested that further research might concentrate on determining the common factors that exist, if any, among the needs of the various method comparisons that were found to reveal significant and non-significant difference in the within group comparisons. Such an attempt might lend more insight into the differences of motivational forces and patterns in normal and neurotic subjects. Suggestions for research utilizing other variables and other groups were also made. The theoretical bases for these suggestions were discussed.

ANNOTATED BIBLIOGRAPHY

Allport, Gordon W., "The Trend in Motivational Theory", in the American Journal of Orthopsychiatry, Vol. 23, No. 1, January 1953, p. 107-119.

The theoretical position stated in this article led to the initiation of the present research. Allport notes the increasing tendency to ignore direct methods in favor of projective methods of assessment and traces this trend historically. He believes that psychologists have arrived at a position in which they no longer accept the motives of the healthy adult at their face value. He contends that direct and projective measures of assessment will reveal essentially the same information about the motivational forces of the normal, well adjusted adult. Neurotics, on the other hand, due to their defensiveness and tendency to repression, will yield material on the projective techniques which is contrary to that obtained from direct measures. He concludes by stressing the need for complimentary usage of both direct and projective techniques in order that the resultant interpretation will give a maximally accurate personality picture.

Dauids, Anthony, "A Comparison of Three Methods of Personality Assessment; Direct, Indirect and Projective", in the Journal of Personality, Vol. 23, No. 4, June 1955, p. 423-440.

A report of research designed to compare measures of the effectiveness of adjustment as derived from direct, indirect and projective methods of personality assessment. In this report the author suggests the inclusion of the indirect method as a distinct measure of personality. The study substantiates Allport's position that the personality test performance of the normal adult will be consistent on direct and projective measures.

Dauids, Anthony, and Henry Pildner, "Comparison of Direct and Projective Methods of Personality Assessment Under Different Conditions of Motivation", in Psychological Monographs, Vol. 72, No. 11, Whole No. 464, 1958, p. 1-30.

The authors report on a more extensive comparison of the relative performance on direct and projective personality assessment by subjects under different motivational conditions. Two groups of normal subjects were studied. Five direct and four projective measures of the global variable "alienation syndrome" were utilized. Among the projective instruments

was the Thematic Apperception Test. The results indicated that distortion is likely to take place on direct personality measures as a result of the motivation at the time of testing.

Getzel, J.W., "The Assessment of Personality and Prejudice by the Method of Paired Direct and Projective Questionnaires", unpublished thesis, Harvard, 1951, as quoted by Gordon Allport, "The Trend in Motivational Theory", in the American Journal of Orthopsychiatry, Vol. 23, No. 1, January 1953, p. 107-119.

This doctoral thesis is acknowledged by Allport as the research which brought to his attention the phenomenon of differences in size of discrepancy between normal and neurotic subjects on direct and projective techniques. The author utilized two experiments, one dealing with personality differences between twenty-five well adjusted and forty maladjusted veterans who were applying for veteran grants and the other a study of prejudice among female college students. The author used two forms of a sentence completion test, one self-referent and one other-referent. His findings substantiate Allport's theoretical contention.

APPENDIX 1

THE SELF-RANKING NEED SHEET

APPENDIX 1

THE SELF-RANKING NEED SHEET

Code No. _____

Date _____

INSTRUCTIONS FOR NEED RANKING

Man acts as he does for many reasons. Listed below are 10 needs which many times motivate people to behave as they do. Along side of each need is a brief description which will enable you to get a general idea of its meaning.

Will you please rank these ten needs in order from highest to lowest strength as you see them motivating your behavior. For example, if you feel the need to be helped by others is the strongest of the 10 for you, you then would place Succorance next to line 1. The second strongest would be placed in line 2 and so on until you reach the weakest need which you would place next to line 10. We are interested in how you feel about these needs today not how you would like to be. Once again use your code number to identify this paper. Be sincere. Are there any questions? Thank you.

ACHIEVEMENT: To do one's best, to accomplish something very difficult or significant.

DEFERENCE : To let others make decisions, to conform to what is expected of you.

AUTONOMY : To be independent of other in making decisions, to be able to come and go as you want.

AFFILIATION: To be loyal, to participate in friendly groups, to share or do things with friends.

SUCCORANCE : To receive help or affection from others, to have others be sympathetic and understanding.

DOMINANCE : To persuade and influence others, to supervise others, to be regarded as a leader.

ABASEMENT : To feel guilty when one has done wrong, to accept blame, to feel timid or inferior.

NURTURANCE : To help friends or others in trouble, to forgive others, to be generous with others.

SEX : To go out with or be in love with someone of the opposite sex, to be sexually excited or aroused.

AGGRESSION : To attack contrary points of view, to become angry, to laugh at people, to show hostility to others.

RANKING OF NEEDS

1. _____

6. _____

2. _____

7. _____

3. _____

8. _____

4. _____

9. _____

5. _____

10. _____

APPENDIX 2

THE EDWARDS PERSONAL PREFERENCE SCHEDULE

Edwards Personal Preference Schedule

Allen L. Edwards, University of Washington

DIRECTIONS

This schedule consists of a number of pairs of statements about things that you may or may not like; about ways in which you may or may not feel. Look at the example below.

A I like to talk about myself to others.

B I like to work toward some goal that I have set for myself.

Which of these two statements is more characteristic of what you like? If you like "talking about yourself to others" more than you like "working toward some goal that you have set for yourself," then you should choose A over B. If you like "working toward some goal that you have set for yourself" more than you like "talking about yourself to others," then you should choose B over A.

You may like both A and B. In this case, you would have to choose between the two and you should choose the one that you like better. If you dislike both A and B, then you should choose the one that you dislike less.

Some of the pairs of statements in the schedule have to do with your likes, such as A and B above. Other pairs of statements have to do with how you feel. Look at the example below.

A I feel depressed when I fail at something.

B I feel nervous when giving a talk before a group.

Which of these two statements is more characteristic of how you feel? If "being depressed when you fail at something" is more characteristic of you than "being nervous when giving a talk before a group," then you should choose A over B. If B is more characteristic of you than A, then you should choose B over A.

If both statements describe how you feel, then you should choose the one which you think is more characteristic. If neither statement accurately describes how you feel, then you should choose the one which you consider to be less inaccurate.

Your choice, in each instance, should be in terms of what you like and how you feel at the present time, and not in terms of what you think you should like or how you think you should feel. This is not a test. There are no right or wrong answers. Your choices should be a description of your own personal likes and feelings. Make a choice for every pair of statements; do not skip any.

The pairs of statements on the following pages are similar to the examples given above. Read each pair of statements and pick out the one statement that better describes what you like or how you feel. Make no marks in the booklet. On the separate answer sheet are numbers corresponding to the numbers of the pairs of statements. Check to be sure you are marking for the same item number as the item you are reading in the booklet.

If your answer sheet is printed
in **BLACK** ink:

For each numbered item draw a circle around the A or B to indicate the statement you have chosen.

If your answer sheet is printed
in **BLUE** ink:

For each numbered item fill in the space under A or B as shown in the Directions on the answer sheet.

Do not turn this page until the examiner tells you to start.

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The Psychological Corporation

New York, New York

- 1 **A** I like to help my friends when they are in trouble.
B I like to do my very best in whatever I undertake.
- 2 **A** I like to find out what great men have thought about various problems in which I am interested.
B I would like to accomplish something of great significance.
- 3 **A** Any written work that I do I like to have precise, neat, and well organized.
B I would like to be a recognized authority in some job, profession, or field of specialization.
- 4 **A** I like to tell amusing stories and jokes at parties.
B I would like to write a great novel or play.
- 5 **A** I like to be able to come and go as I want to.
B I like to be able to say that I have done a difficult job well.
- 6 **A** I like to solve puzzles and problems that other people have difficulty with.
B I like to follow instructions and to do what is expected of me.
- 7 **A** I like to experience novelty and change in my daily routine.
B I like to tell my superiors that they have done a good job on something, when I think they have.
- 8 **A** I like to plan and organize the details of any work that I have to undertake.
B I like to follow instructions and to do what is expected of me.
- 9 **A** I like people to notice and to comment upon my appearance when I am out in public.
B I like to read about the lives of great men.
- 10 **A** I like to avoid situations where I am expected to do things in a conventional way.
B I like to read about the lives of great men.
- 11 **A** I would like to be a recognized authority in some job, profession, or field of specialization.
B I like to have my work organized and planned before beginning it.
- 12 **A** I like to find out what great men have thought about various problems in which I am interested.
B If I have to take a trip, I like to have things planned in advance.
- 13 **A** I like to finish any job or task that I begin.
B I like to keep my things neat and orderly on my desk or workspace.
- 14 **A** I like to tell other people about adventures and strange things that have happened to me.
B I like to have my meals organized and a definite time set aside for eating.
- 15 **A** I like to be independent of others in deciding what I want to do.
B I like to keep my things neat and orderly on my desk or workspace.
- 16 **A** I like to be able to do things better than other people can.
B I like to tell amusing stories and jokes at parties.
- 17 **A** I like to conform to custom and to avoid doing things that people I respect might consider unconventional.
B I like to talk about my achievements.
- 18 **A** I like to have my life so arranged that it runs smoothly and without much change in my plans.
B I like to tell other people about adventures and strange things that have happened to me.
- 19 **A** I like to read books and plays in which sex plays a major part.
B I like to be the center of attention in a group.
- 20 **A** I like to criticize people who are in a position of authority.
B I like to use words which other people often do not know the meaning of.
- 21 **A** I like to accomplish tasks that others recognize as requiring skill and effort.
B I like to be able to come and go as I want to.
- 22 **A** I like to praise someone I admire.
B I like to feel free to do what I want to do.
- 23 **A** I like to keep my letters, bills, and other papers neatly arranged and filed according to some system.
B I like to be independent of others in deciding what I want to do.
- 24 **A** I like to ask questions which I know no one will be able to answer.
B I like to criticize people who are in a position of authority.
- 25 **A** I get so angry that I feel like throwing and breaking things.
B I like to avoid responsibilities and obligations.
- 26 **A** I like to be successful in things undertaken.
B I like to form new friendships.
- 27 **A** I like to follow instructions and to do what is expected of me.
B I like to have strong attachments with my friends.
- 28 **A** Any written work that I do I like to have precise, neat, and well organized.
B I like to make as many friends as I can.
- 29 **A** I like to tell amusing stories and jokes at parties.
B I like to write letters to my friends.
- 30 **A** I like to be able to come and go as I want to.
B I like to share things with my friends.
- 31 **A** I like to solve puzzles and problems that other people have difficulty with.
B I like to judge people by why they do something—not by what they actually do.
- 32 **A** I like to accept the leadership of people I admire.
B I like to understand how my friends feel about various problems they have to face.
- 33 **A** I like to have my meals organized and a definite time set aside for eating.
B I like to study and to analyze the behavior of others.

- 34 **A** I like to say things that are regarded as witty and clever by other people.
B I like to put myself in someone else's place and to imagine how I would feel in the same situation.
- 35 **A** I like to feel free to do what I want to do.
B I like to observe how another individual feels in a given situation.
- 36 **A** I like to accomplish tasks that others recognize as requiring skill and effort.
B I like my friends to encourage me when I meet with failure.
- 37 **A** When planning something, I like to get suggestions from other people whose opinions I respect.
B I like my friends to treat me kindly.
- 38 **A** I like to have my life so arranged that it runs smoothly and without much change in my plans.
B I like my friends to feel sorry for me when I am sick.
- 39 **A** I like to be the center of attention in a group.
B I like my friends to make a fuss over me when I am hurt or sick.
- 40 **A** I like to avoid situations where I am expected to do things in a conventional way.
B I like my friends to sympathize with me and to cheer me up when I am depressed.
- 41 **A** I would like to write a great novel or play.
B When serving on a committee, I like to be appointed or elected chairman.
- 42 **A** When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.
B I like to supervise and to direct the actions of other people whenever I can.
- 43 **A** I like to keep my letters, bills, and other papers neatly arranged and filed according to some system.
B I like to be one of the leaders in the organizations and groups to which I belong.
- 44 **A** I like to ask questions which I know no one will be able to answer.
B I like to tell other people how to do their jobs.
- 45 **A** I like to avoid responsibilities and obligations.
B I like to be called upon to settle arguments and disputes between others.
- 46 **A** I would like to be a recognized authority in some job, profession, or field of specialization.
B I feel guilty whenever I have done something I know is wrong.
- 47 **A** I like to read about the lives of great men.
B I feel that I should confess the things that I have done that I regard as wrong.
- 48 **A** I like to plan and organize the details of any work that I have to undertake.
B When things go wrong for me, I feel that I am more to blame than anyone else.
- 49 **A** I like to use words which other people often do not know the meaning of.
B I feel that I am inferior to others in most respects.
- 50 **A** I like to criticize people who are in a position of authority.
B I feel timid in the presence of other people I regard as my superiors.
- 51 **A** I like to do my very best in whatever I undertake.
B I like to help other people who are less fortunate than I am.
- 52 **A** I like to find out what great men have thought about various problems in which I am interested.
B I like to be generous with my friends.
- 53 **A** I like to make a plan before starting in to do something difficult.
B I like to do small favors for my friends.
- 54 **A** I like to tell other people about adventures and strange things that have happened to me.
B I like my friends to confide in me and to tell me their troubles.
- 55 **A** I like to say what I think about things.
B I like to forgive my friends who may sometimes hurt me.
- 56 **A** I like to be able to do things better than other people can.
B I like to eat in new and strange restaurants.
- 57 **A** I like to conform to custom and to avoid doing things that people I respect might consider unconventional.
B I like to participate in new fads and fashions.
- 58 **A** I like to have my work organized and planned before beginning it.
B I like to travel and to see the country.
- 59 **A** I like people to notice and to comment upon my appearance when I am out in public.
B I like to move about the country and to live in different places.
- 60 **A** I like to be independent of others in deciding what I want to do.
B I like to do new and different things.
- 61 **A** I like to be able to say that I have done a difficult job well.
B I like to work hard at any job I undertake.
- 62 **A** I like to tell my superiors that they have done a good job on something, when I think they have.
B I like to complete a single job or task at a time before taking on others.
- 63 **A** If I have to take a trip, I like to have things planned in advance.
B I like to keep working at a puzzle or problem until it is solved.
- 64 **A** I sometimes like to do things just to see what effect it will have on others.
B I like to stick at a job or problem even when it may seem as if I am not getting anywhere with it.

- 65 **A** I like to do things that other people regard as unconventional.
B I like to put in long hours of work without being distracted.
- 66 **A** I would like to accomplish something of great significance.
B I like to kiss attractive persons of the opposite sex.
- 67 **A** I like to praise someone I admire.
B I like to be regarded as physically attractive by those of the opposite sex.
- 68 **A** I like to keep my things neat and orderly on my desk or workspace.
B I like to be in love with someone of the opposite sex.
- 69 **A** I like to talk about my achievements.
B I like to listen to or to tell jokes in which sex plays a major part.
- 70 **A** I like to do things in my own way and without regard to what others may think.
B I like to read books and plays in which sex plays a major part
- 71 **A** I would like to write a great novel or play.
B I like to attack points of view that are contrary to mine.
- 72 **A** When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.
B I feel like criticizing someone publicly if he deserves it.
- 73 **A** I like to have my life so arranged that it runs smoothly and without much change in my plans.
B I get so angry that I feel like throwing and breaking things.
- 74 **A** I like to ask questions which I know no one will be able to answer.
B I like to tell other people what I think of them.
- 75 **A** I like to avoid responsibilities and obligations.
B I feel like making fun of people who do things that I regard as stupid.
- 76 **A** I like to be loyal to my friends.
B I like to do my very best in whatever I undertake.
- 77 **A** I like to observe how another individual feels in a given situation.
B I like to be able to say that I have done a difficult job well.
- 78 **A** I like my friends to encourage me when I meet with failure.
B I like to be successful in things undertaken.
- 79 **A** I like to be one of the leaders in the organizations and groups to which I belong.
B I like to be able to do things better than other people can.
- 80 **A** When things go wrong for me, I feel that I am more to blame than anyone else.
B I like to solve puzzles and problems that other people have difficulty with.
- 81 **A** I like to do things for my friends.
B When planning something, I like to get suggestions from other people whose opinions I respect.
- 82 **A** I like to put myself in someone else's place and to imagine how I would feel in the same situation.
B I like to tell my superiors that they have done a good job on something, when I think they have.
- 83 **A** I like my friends to be sympathetic and understanding when I have problems.
B I like to accept the leadership of people I admire.
- 84 **A** When serving on a committee, I like to be appointed or elected chairman.
B When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.
- 85 **A** If I do something that is wrong, I feel that I should be punished for it.
B I like to conform to custom and to avoid doing things that people I respect might consider unconventional.
- 86 **A** I like to share things with my friends.
B I like to make a plan before starting in to do something difficult.
- 87 **A** I like to understand how my friends feel about various problems they have to face.
B If I have to take a trip, I like to have things planned in advance.
- 88 **A** I like my friends to treat me kindly.
B I like to have my work organized and planned before beginning it.
- 89 **A** I like to be regarded by others as a leader.
B I like to keep my letters, bills, and other papers neatly arranged and filed according to some system.
- 90 **A** I feel that the pain and misery that I have suffered has done me more good than harm.
B I like to have my life so arranged that it runs smoothly and without much change in my plans.
- 91 **A** I like to have strong attachments with my friends.
B I like to say things that are regarded as witty and clever by other people.
- 92 **A** I like to think about the personalities of my friends and to try to figure out what makes them as they are.
B I sometimes like to do things just to see what effect it will have on others.
- 93 **A** I like my friends to make a fuss over me when I am hurt or sick.
B I like to talk about my achievements.
- 94 **A** I like to tell other people how to do their jobs.
B I like to be the center of attention in a group.
- 95 **A** I feel timid in the presence of other people I regard as my superiors.
B I like to use words which other people often do not know the meaning of.
- 96 **A** I like to do things with my friends rather than by myself.
B I like to say what I think about things.

- 97 A I like to study and to analyze the behavior of others.
B I like to do things that other people regard as unconventional.
- 98 A I like my friends to feel sorry for me when I am sick.
B I like to avoid situations where I am expected to do things in a conventional way.
- 99 A I like to supervise and to direct the actions of other people whenever I can.
B I like to do things in my own way without regard to what others may think.
- 100 A I feel that I am inferior to others in most respects.
B I like to avoid responsibilities and obligations.
- 101 A I like to be successful in things undertaken.
B I like to form new friendships.
- 102 A I like to analyze my own motives and feelings.
B I like to make as many friends as I can.
- 103 A I like my friends to help me when I am in trouble.
B I like to do things for my friends.
- 104 A I like to argue for my point of view when it is attacked by others.
B I like to write letters to my friends.
- 105 A I feel guilty whenever I have done something I know is wrong.
B I like to have strong attachments with my friends.
- 106 A I like to share things with my friends.
B I like to analyze my own motives and feelings.
- 107 A I like to accept the leadership of people I admire.
B I like to understand how my friends feel about various problems they have to face.
- 108 A I like my friends to do many small favors for me cheerfully.
B I like to judge people by why they do something—not by what they actually do.
- 109 A When with a group of people, I like to make the decisions about what we are going to do.
B I like to predict how my friends will act in various situations.
- 110 A I feel better when I give in and avoid a fight, than I would if I tried to have my own way.
B I like to analyze the feelings and motives of others.
- 111 A I like to form new friendships.
B I like my friends to help me when I am in trouble.
- 112 A I like to judge people by why they do something—not by what they actually do.
B I like my friends to show a great deal of affection toward me.
- 113 A I like to have my life so arranged that it runs smoothly and without much change in my plans.
B I like my friends to feel sorry for me when I am sick.
- 114 A I like to be called upon to settle arguments and disputes between others.
B I like my friends to do many small favors for me cheerfully.
- 115 A I feel that I should confess the things that I have done that I regard as wrong.
B I like my friends to sympathize with me and to cheer me up when I am depressed.
- 116 A I like to do things with my friends rather than by myself.
B I like to argue for my point of view when it is attacked by others.
- 117 A I like to think about the personalities of my friends and to try to figure out what makes them as they are.
B I like to be able to persuade and influence others to do what I want to do.
- 118 A I like my friends to sympathize with me and to cheer me up when I am depressed.
B When with a group of people, I like to make the decisions about what we are going to do.
- 119 A I like to ask questions which I know no one will be able to answer.
B I like to tell other people how to do their jobs.
- 120 A I feel timid in the presence of other people I regard as my superiors.
B I like to supervise and to direct the actions of other people whenever I can.
- 121 A I like to participate in groups in which the members have warm and friendly feelings toward one another.
B I feel guilty whenever I have done something I know is wrong.
- 122 A I like to analyze the feelings and motives of others.
B I feel depressed by my own inability to handle various situations.
- 123 A I like my friends to feel sorry for me when I am sick.
B I feel better when I give in and avoid a fight, than I would if I tried to have my own way.
- 124 A I like to be able to persuade and influence others to do what I want.
B I feel depressed by my own inability to handle various situations.
- 125 A I like to criticize people who are in a position of authority.
B I feel timid in the presence of other people I regard as my superiors.
- 126 A I like to participate in groups in which the members have warm and friendly feelings toward one another.
B I like to help my friends when they are in trouble.
- 127 A I like to analyze my own motives and feelings.
B I like to sympathize with my friends when they are hurt or sick.
- 128 A I like my friends to help me when I am in trouble.
B I like to treat other people with kindness and sympathy.
- 129 A I like to be one of the leaders in the organizations and groups to which I belong.
B I like to sympathize with my friends when they are hurt or sick.

- 130 **A** I feel that the pain and misery that I have suffered has done me more good than harm.
B I like to show a great deal of affection toward my friends.
- 131 **A** I like to do things with my friends rather than by myself.
B I like to experiment and to try new things.
- 132 **A** I like to think about the personalities of my friends and to try to figure out what makes them as they are.
B I like to try new and different jobs—rather than to continue doing the same old things.
- 133 **A** I like my friends to be sympathetic and understanding when I have problems.
B I like to meet new people.
- 134 **A** I like to argue for my point of view when it is attacked by others.
B I like to experience novelty and change in my daily routine.
- 135 **A** I feel better when I give in and avoid a fight, than I would if I tried to have my own way.
B I like to move about the country and to live in different places.
- 136 **A** I like to do things for my friends.
B When I have some assignment to do, I like to start in and keep working on it until it is completed.
- 137 **A** I like to analyze the feelings and motives of others.
B I like to avoid being interrupted while at my work.
- 138 **A** I like my friends to do many small favors for me cheerfully.
B I like to stay up late working in order to get a job done.
- 139 **A** I like to be regarded by others as a leader.
B I like to put in long hours of work without being distracted.
- 140 **A** If I do something that is wrong, I feel that I should be punished for it.
B I like to stick at a job or problem even when it may seem as if I am not getting anywhere with it.
- 141 **A** I like to be loyal to my friends.
B I like to go out with attractive persons of the opposite sex.
- 142 **A** I like to predict how my friends will act in various situations.
B I like to participate in discussions about sex and sexual activities.
- 143 **A** I like my friends to show a great deal of affection toward me.
B I like to become sexually excited.
- 144 **A** When with a group of people, I like to make the decisions about what we are going to do.
B I like to engage in social activities with persons of the opposite sex.
- 145 **A** I feel depressed by my own inability to handle various situations.
B I like to read books and plays in which sex plays a major part.
- 146 **A** I like to write letters to my friends.
B I like to read newspaper accounts of murders and other forms of violence.
- 147 **A** I like to predict how my friends will act in various situations.
B I like to attack points of view that are contrary to mine.
- 148 **A** I like my friends to make a fuss over me when I am hurt or sick.
B I feel like blaming others when things go wrong for me.
- 149 **A** I like to tell other people how to do their jobs.
B I feel like getting revenge when someone has insulted me.
- 150 **A** I feel that I am inferior to others in most respects.
B I feel like telling other people off when I disagree with them.
- 151 **A** I like to help my friends when they are in trouble.
B I like to do my very best in whatever I undertake.
- 152 **A** I like to travel and to see the country.
B I like to accomplish tasks that others recognize as requiring skill and effort.
- 153 **A** I like to work hard at any job I undertake.
B I would like to accomplish something of great significance.
- 154 **A** I like to go out with attractive persons of the opposite sex.
B I like to be successful in things undertaken.
- 155 **A** I like to read newspaper accounts of murders and other forms of violence.
B I would like to write a great novel or play.
- 156 **A** I like to do small favors for my friends.
B When planning something, I like to get suggestions from other people whose opinions I respect.
- 157 **A** I like to experience novelty and change in my daily routine.
B I like to tell my superiors that they have done a good job on something, when I think they have.
- 158 **A** I like to stay up late working in order to get a job done.
B I like to praise someone I admire.
- 159 **A** I like to become sexually excited.
B I like to accept the leadership of people I admire.
- 160 **A** I feel like getting revenge when someone has insulted me.
B When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.
- 161 **A** I like to be generous with my friends.
B I like to make a plan before starting in to do something difficult.

- 162 **A** I like to meet new people.
B Any written work that I do I like to have precise, neat, and well organized.
- 163 **A** I like to finish any job or task that I begin.
B I like to keep my things neat and orderly on my desk or workspace.
- 164 **A** I like to be regarded as physically attractive by those of the opposite sex.
B I like to plan and organize the details of any work that I have to undertake.
- 165 **A** I like to tell other people what I think of them.
B I like to have my meals organized and a definite time set aside for eating.
- 166 **A** I like to show a great deal of affection toward my friends.
B I like to say things that are regarded as witty and clever by other people.
- 167 **A** I like to try new and different jobs—rather than to continue doing the same old things.
B I sometimes like to do things just to see what effect it will have on others.
- 168 **A** I like to stick at a job or problem even when it may seem as if I am not getting anywhere with it.
B I like people to notice and to comment upon my appearance when I am out in public.
- 169 **A** I like to read books and plays in which sex plays a major part.
B I like to be the center of attention in a group.
- 170 **A** I feel like blaming others when things go wrong for me.
B I like to ask questions which I know no one will be able to answer.
- 171 **A** I like to sympathize with my friends when they are hurt or sick.
B I like to say what I think about things.
- 172 **A** I like to eat in new and strange restaurants.
B I like to do things that other people regard as unconventional.
- 173 **A** I like to complete a single job or task at a time before taking on others.
B I like to feel free to do what I want to do.
- 174 **A** I like to participate in discussions about sex and sexual activities.
B I like to do things in my own way without regard to what others may think.
- 175 **A** I get so angry that I feel like throwing and breaking things.
B I like to avoid responsibilities and obligations.
- 176 **A** I like to help my friends when they are in trouble.
B I like to be loyal to my friends.
- 177 **A** I like to do new and different things.
B I like to form new friendships.
- 178 **A** When I have some assignment to do, I like to start in and keep working on it until it is completed.
B I like to participate in groups in which the members have warm and friendly feelings toward one another.
- 179 **A** I like to go out with attractive persons of the opposite sex.
B I like to make as many friends as I can.
- 180 **A** I like to attack points of view that are contrary to mine.
B I like to write letters to my friends.
- 181 **A** I like to be generous with my friends.
B I like to observe how another individual feels in a given situation.
- 182 **A** I like to eat in new and strange restaurants.
B I like to put myself in someone else's place and to imagine how I would feel in the same situation.
- 183 **A** I like to stay up late working in order to get a job done.
B I like to understand how my friends feel about various problems they have to face.
- 184 **A** I like to become sexually excited.
B I like to study and to analyze the behavior of others.
- 185 **A** I feel like making fun of people who do things that I regard as stupid.
B I like to predict how my friends will act in various situations.
- 186 **A** I like to forgive my friends who may sometimes hurt me.
B I like my friends to encourage me when I meet with failure.
- 187 **A** I like to experiment and to try new things.
B I like my friends to be sympathetic and understanding when I have problems.
- 188 **A** I like to keep working at a puzzle or problem until it is solved.
B I like my friends to treat me kindly.
- 189 **A** I like to be regarded as physically attractive by those of the opposite sex.
B I like my friends to show a great deal of affection toward me.
- 190 **A** I feel like criticizing someone publicly if he deserves it.
B I like my friends to make a fuss over me when I am hurt or sick.
- 191 **A** I like to show a great deal of affection toward my friends.
B I like to be regarded by others as a leader.
- 192 **A** I like to try new and different jobs—rather than to continue doing the same old things.
B When serving on a committee, I like to be appointed or elected chairman.
- 193 **A** I like to finish any job or task that I begin.
B I like to be able to persuade and influence others to do what I want.

- 194 **A** I like to participate in discussions about sex and sexual activities.
B I like to be called upon to settle arguments and disputes between others.
- 195 **A** I get so angry that I feel like throwing and breaking things.
B I like to tell other people how to do their jobs.
- 196 **A** I like to show a great deal of affection toward my friends.
B When things go wrong for me, I feel that I am more to blame than anyone else.
- 197 **A** I like to move about the country and to live in different places.
B If I do something that is wrong, I feel that I should be punished for it.
- 198 **A** I like to stick at a job or problem even when it may seem as if I am not getting anywhere with it.
B I feel that the pain and misery that I have suffered has done me more good than harm.
- 199 **A** I like to read books and plays in which sex plays a major part.
B I feel that I should confess the things that I have done that I regard as wrong.
- 200 **A** I feel like blaming others when things go wrong for me.
B I feel that I am inferior to others in most respects.
- 201 **A** I like to do my very best in whatever I undertake.
B I like to help other people who are less fortunate than I am.
- 202 **A** I like to do new and different things.
B I like to treat other people with kindness and sympathy.
- 203 **A** When I have some assignment to do, I like to start in and keep working on it until it is completed.
B I like to help other people who are less fortunate than I am.
- 204 **A** I like to engage in social activities with persons of the opposite sex.
B I like to forgive my friends who may sometimes hurt me.
- 205 **A** I like to attack points of view that are contrary to mine.
B I like my friends to confide in me and to tell me their troubles.
- 206 **A** I like to treat other people with kindness and sympathy.
B I like to travel and to see the country.
- 207 **A** I like to conform to custom and to avoid doing things that people I respect might consider unconventional.
B I like to participate in new fads and fashions.
- 208 **A** I like to work hard at any job I undertake.
B I like to experience novelty and change in my daily routine.
- 209 **A** I like to kiss attractive persons of the opposite sex.
B I like to experiment and to try new things.
- 210 **A** I feel like telling other people off when I disagree with them.
B I like to participate in new fads and fashions.
- 211 **A** I like to help other people who are less fortunate than I am.
B I like to finish any job or task that I begin.
- 212 **A** I like to move about the country and to live in different places.
B I like to put in long hours of work without being distracted.
- 213 **A** If I have to take a trip, I like to have things planned in advance.
B I like to keep working at a puzzle or problem until it is solved.
- 214 **A** I like to be in love with someone of the opposite sex.
B I like to complete a single job or task before taking on others.
- 215 **A** I like to tell other people what I think of them.
B I like to avoid being interrupted while at my work.
- 216 **A** I like to do small favors for my friends.
B I like to engage in social activities with persons of the opposite sex.
- 217 **A** I like to meet new people.
B I like to kiss attractive persons of the opposite sex.
- 218 **A** I like to keep working at a puzzle or problem until it is solved.
B I like to be in love with someone of the opposite sex.
- 219 **A** I like to talk about my achievements.
B I like to listen to or to tell jokes in which sex plays a major part.
- 220 **A** I feel like making fun of people who do things that I regard as stupid.
B I like to listen to or to tell jokes in which sex plays a major part.
- 221 **A** I like my friends to confide in me and to tell me their troubles.
B I like to read newspaper accounts of murders and other forms of violence.
- 222 **A** I like to participate in new fads and fashions.
B I feel like criticizing someone publicly if he deserves it.
- 223 **A** I like to avoid being interrupted while at my work.
B I feel like telling other people off when I disagree with them.
- 224 **A** I like to listen to or to tell jokes in which sex plays a major part.
B I feel like getting revenge when someone has insulted me.
- 225 **A** I like to avoid responsibilities and obligations.
B I feel like making fun of people who do things that I regard as stupid.

APPENDIX 3

DESCRIPTION OF THEMATIC APPERCEPTION CARDS

APPENDIX 3

DESCRIPTION OF THEMATIC APPERCEPTION CARDS¹

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.

3EM. 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.

5. A middle-aged woman is standing on the threshold of a half-opened door looking into a room.

6EM. A short, elderly woman stands with her back turned to a tall young man. The latter is looking downward with a perplexed expression.

7EM. A gray-haired man is looking at a younger man who is sullenly staring into space.

10. A young woman's head against a man's shoulder.

13MF. A young man is standing with downcast head buried in his arm. Behind him is the figure of a woman lying in bed.

18EM. A man is clutched from behind by three hands. The figures of his antagonists are invisible.

¹ H.A. Murray, Thematic Apperception Test Manual, Harvard University Printing Office, Cambridge, Mass., 1943, p. 19-20.

APPENDIX 4

INSTRUCTIONS FOR SUBJECTS

APPENDIX 4

INSTRUCTIONS

Will you please fill in the following data at the top of the first page.

Code Number: _____

Occupation: _____

Age: _____

Sex: _____

Highest Grade

Date: _____

Attained in School: _____

The purpose of this research is to obtain an idea of the typical stories told to these pictures by people in your age range. We are only interested in group findings (averages) and will not need to know your name. Will you please select a five digit code number (e.g. 60291) for purposes of identification and put this number on all work done in this experiment. Remember this number since you will use it again in the second part of the experiment.

The success and meaningfulness of the experiment depends upon your sincerity and cooperation in performance of these tasks. Since your identity is unknown there is no reason for deception. Thank you for your cooperation and valuable time.

The first part of the experiment is an opportunity for free imagination. Some pictures will be shown to you and you are to make up a story concerning each picture. Write this story on the paper provided at your place.

The picture will be shown for one minute. You have five minutes to write your story. At the end of these five minutes another picture will be shown and the same procedure followed.

IMPORTANT

Include the following parts in each story:

1. What has led up to the situation shown in the picture.
2. Describe what is happening at the moment and what the characters are feeling and thinking.
3. State what the outcome will be.

There is no right or wrong story, use your imagination freely and make up anything you please.

Thank you.

APPENDIX 5

**INSTRUCTIONS FOR SCORING THE
THEMATIC APPERCEPTION TEST
PROTOCOLS**

APPENDIX 5

INSTRUCTIONS FOR SCORING THE THEMATIC APPERCEPTION TEST PROTOCOLS

1. Read each story trying to determine the chief motivational factors in the story which cause the hero to act as he does. These motives can be chosen by the intensity of affect expressed, the key role or essential aspect it plays in giving form to the story, the frequency of appearance and the intensity expressed. A list of needs with definitions are provided to enable you to score the stories.

2. The scorer should keep in mind the necessity of estimating the strength or intensity of the needs expressed. The strength of each is to be rated on a one to three scale, three being the highest intensity rating for any need on a single story. The criteria of strength are intensity, duration, frequency and importance in the plot. For example, for the need aggression, a flash of irritability gets a rating of 1, whereas violent anger or the continued or repeated occurrence of a milder form like quarreling is scored three. Marks two and one are given for those needs of a lesser intensity also mentioned in the story.

3. In the majority of stories you should be able to score three needs, in some you will not. Take your time in reading the stories and refer often to the definition sheet so as to gain the necessary familiarity and to develop a set that includes all the needs listed.

APPENDIX 6

ABSTRACT OF

A Comparison of Three Methods of Need Assessment
With Normal and Neurotic Subjects

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ABSTRACT OF

A Comparison of Three Methods of Need Assessment With Normal and Neurotic Subjects¹

The present research has been an effort in the investigation of the intervalidation between direct, indirect, and projective methods of personality assessment. Gordon Allport's contention regarding the difference between normal and neurotic subjects in their response to direct and projective methods of assessment served as the theoretical link and justification for the present study.

In the review of the literature the classificatory schemes existing for methods of assessment were reviewed and the complexity of the taxonomic problem was noted. This was followed by a critical review of the studies relevant to Allport's theoretical position.

Five major hypotheses were tested. The first three hypotheses dealt with the differences between normal and neurotic adults with regard to their discrepancy scores on the direct versus indirect, direct versus projective, and indirect versus projective methods of need assessment.

¹ Hugh H. Carberry, doctoral thesis presented to the School of Psychology and Education of the University of Ottawa, Ontario, July 1964, ix-123 p.

These three hypotheses were tested utilizing global discrepancy scores and discrepancy scores peculiar to each of the ten needs measured. Hypotheses IV and V were concerned with the differences on the various method comparisons within each group separately.

Sixty normal subjects and thirty outpatient neurotic subjects were administered the Self-Ranking Need Sheet, the Edwards Personal Preference Schedule and ten cards of the Thematic Apperception Test. Comparisons were made in terms of global discrepancy scores and then separately for the discrepancy scores on each of the following ten needs: achievement, abasement, affiliation, aggression, autonomy, deference, dominance, nurturance, sex, and succorance. Comparisons were made between the two groups and also within the groups.

The results tended to support Allport's theoretical notion but with important qualifications. The neurotic subjects' discrepancy scores were greater than the normal subjects' at the global level and also on six out of thirty possible combinations of the ten needs and three method comparison dimensions. The normal subjects showed slightly less consistency on the within method comparisons than was expected in light of Allport's theory. These results were discussed in some detail along with recommendations for further research.