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PERSONALITY ASSESSMENT

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the
Degree Doctor of Philosophy in the Graduate School
of The Ohio State University

By
Christel Alma Woodward, B. S., M. A.

***********
The Ohio State University
1968

Approved by

Adviser
Department of Psychology
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A study of this kind involves many people who are willing to give unstintingly of their time and who are willing to put their clinical skills under the scrutiny of others. I would like to express my sincere appreciation to all the clinicians who served as criterion judges, test judges and therapists in this study. Their unfailing cooperation throughout the numerous stages of the study was remarkable. Solvaag Wenar, who administered the Rorschach test to the adolescents, willingly made time for this task in an already crowded schedule.

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To Paul D. Woodward, my husband, was reserved the role of encouragement. Thanks are due him for his willingness to endure a wife who was "researching".
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CHAPTER I

INTRODUCTION AND STATEMENT OF PURPOSE

The controversy surrounding the use of actuarial methods and their efficacy as compared with clinical judgement has received much discussion (Gough, 1962; Holt, 1958; Holtzman, 1960; MacAuthur, 1955; Meehl, 1954, 1957, 1959, 1965; Sines, 1966). Part of the resistance to the use of actuarial methods in assessment appears to center on the meaning assigned to the word, actuarial. In other instances, it appears to be a more emotionally based phenomenon (Gough, 1962; Meehl, 1954). On the whole there has been limited acceptance in the clinic of Meehl's suggestion that actuarially derived personality descriptions may be superior to the usual personality assessment techniques (Meehl, 1954, 1956, 1959, 1965).

Meehl (1965) points out that despite the demonstrated superiority of actuarial methods for certain assessment tasks, actuarial assessment techniques are not widely used in the clinical setting. He has further stated that actuarial methods may be more practical and that present assessment techniques are an inefficient
use of the clinician's time. Although actuarial data pertinent to clinical assessment tasks has not been available until recently, Halbower (1955), Gilberstadt (1963), Gilberstadt and Duker (1965), and Marks and Seeman (1963) have begun to supply some actuarial data to fill our knowledge gap and give the clinician actuarial data to use.

Lindsey (1965) has presented the only published research supporting the superiority of the clinical approach in a diagnostic task. However, this instance was predicted by Meehl (1959) when he elucidated six conditions in which the clinician should make more accurate assessments than the actuary. In his reply to Lindsey's article, Meehl (1965) also raises the question of whether this study represents "naive" actuary pitted against "sophisticated" clinician.

It has been suggested that, rather than pitting actuarial descriptions against clinical descriptions, we might utilize an optimal combination of these methods in the assessment enterprise. Relevant to this, Sawyer (1966) elucidates a schema for classifying different combinations of clinical and statistical methods of data collection and combination. His analysis of the data from forty-five studies concerned with prediction indicates an obvious superiority of mechanical modes of data collection and combination. However, he also suggests that the most sophisticated of the clinical combinations, "clinical synthesis" (taking predictions produced by mechanical or actuarial
combination and treating them as data to be combined clinically with other data), has not received adequate empirical comparison with the mechanical modes of data combination. (Sawyer's "clinical synthesis" is very similar to Holt's 1958 definition of "sophisticated clinical prediction".) Sawyer's (1933) review further reveals that no empirical study of this sort in the area of personality assessment was available in the literature as of 1966.

Stricker (1967) recently published results of a study pertaining to this problem. In this research, both experienced and inexperienced clinicians were asked to discriminate normal from pathological figure drawings on the basis of actuarial decision rules developed by Hiler and Nesvig (1965) and their own clinical judgement. None of the experienced clinicians were asked to discriminate normal from pathological figure drawings on the basis of actuarial decision rules developed by Hiler and Nesvig (1965) and their own clinical judgement. None of the experienced clinicians and only 23 per cent of the inexperienced clinicians were more accurate than the actuarial rules. Here however the clinicians were given no other pertinent information about the children whose drawings they were judging.

There is little research available that suggests in which situation to rely on the actuarial table ("mechanical composite" in Sawyer's schema) and when or what kinds of additional information
may be pertinent to enhance the hit rate of the clinician beyond the table in a clinical setting. Meehl (1957), in fact, suggests that the clinician, left to his own devices, will be less accurate than the actuary. He suggests that only in the unusual case should the clinician alter an answer derived from actuarial sources.

Marks and Seeman's Atlas (1963) is often used in the clinic today as a handy reference. Rarely, however, does the clinician take seriously just the actuarial data. He may adjust his predictions to take into account population differences, patient's Rorschach responses, or clinical impressions gleaned from interviews with patients. The clinician has no objective rules to follow and does not know whether additional data have increased his accuracy or not.

Much confusion has been created by the use of varying definitions of the term "actuarial". Actuarial description as used in this study "occurs when there are explicit rules by which specified descriptive attributes are assigned to individuals on the basis of empirically demonstrated associations between specified data (e.g. MMPI profiles, Rorschach psychograms, word associations, etc.) and the descriptive statements" (Marks and Seeman, 1963, p. 5). It is important to understand that the clinician may use clinical judgement in deriving descriptive attributes (and does), but
actuarial methods are used in determining the relationships between the descriptive attributes and the specified data. Thus, personality attributes found to be characteristic of a certain patient (or class of patients), independent of the test, may be correlated with the test to derive actuarial tables showing regularities or contingencies between them. Actuarial description as defined here is equivalent to Sawyer's (1966) term "mechanical combination". The tables used in this study were drawn from data collected for the Adolescent Personality Description Project (Marks, 1967) and represent actuarial descriptions as defined above.

The design used in this research is closely related to procedures followed over the past fifteen years in studies evaluating the relative contribution of various psychological tests, used singly and in combination, to personality assessment tasks.

One of the earliest studies of this type was done by Kostlan (1954) who used a fractional-omission design. He posed the question "which of four sources of information about patients--the Rorschach, the MMPI, the Stein Sentence Completion Test, a Standard Social Case History--yielded the most valid inferences?" The patients were five Caucasian, male Veterans Administration Hospital outpatients. His criterion ratings were made by eight judges who held Ph.D. degrees in clinical psychology, and who based their ratings
on all four sources of information. His test judges (20 clinical psychologists with at least two years of psychodiagnostic experience) were divided into four groups of five each and asked to complete two True-False check lists about the patients. Kostlan concluded that without social case histories, no combination of sources yielded better results than identifying (face sheet) data alone, which used singly-provided inferences significantly better than chance.

Little and Schneidman (1959) studied the congruencies among interpretations made from four psychological tests (Rorschach, TAT, MAPS, MMPI) and anamnestic data by highly skilled interpreters of the various instruments. They used data from 12 subjects, three in each of four diagnostic categories. No criterion measure, per se, was used, although the anamnestic data were relied upon as having the greatest validity. An intrajudge study of reliability was found to be "disappointingly low". Interjudge agreement was also quite low.

The objective of a study by Golden (1934) was to determine whether the reliability and validity of three frequently used psychological tests (Rorschach, MMPI, and TAT) increased as a function of increasing amounts of test data. He, in part, used data collected earlier by Little and Schneidman (1959). The validity criteria were psychiatrists' judgments on the basis of extensive
case history materials. The results did not support the view that clinical inferences based on a battery of tests are more reliable and valid than those based on individual tests. His results differed from Kostlan (1954) in that identifying data alone did not lead to statistically significant inferences.

Sines (1959) had clinicians perform Q sorts sequentially, given increasing amounts of information about the same patients. The data evaluated by the clinicians consisted of a four page Biographical Data Sheet (BDS), MMPI, Rorschach, and a diagnostic interview conducted by the judge with the patients he was asked to assess. The BDS was always the first source of information while the others were presented in different sequences. The criterion measure was the patient's therapist's Q sort after 10 hours of therapy. Sines found that (a) the diagnostic interview consistently increased accuracy of judgments based on Q sorts of previous data, whereas, in general, the MMPI and the Rorschach did not; (b) while the relationship between amount of data and accuracy was complex, there was a slight though not significant trend in the direction of greater accuracy with increasing amounts of information; (c) clinicians inferences tended to crystallize early in the sequence and they seemed unwilling to change their descriptions as more data were made available to them; (d) biographical data appeared to be a promising source of information for personality assessment tasks.
Studies of this kind have been criticized in that the criterion is often seen as a matter of comparing one person's bias with another. The criterion measure has been formed either by having extensive rating information (but not allowing direct or indirect contact with the patients through interviews or video and sound recordings of the patients) available to the criterion judges, while varying combinations of data that are available to the clinicians completing the rating tasks (Kostlan, 1954) or by using ratings made by the patient's therapist as the criterion measure (Silverman, 1959; Sines, 1959). The need for a more objective, less arbitrary, independent criterion measure which utilizes more than one person's judgment is often mentioned in the discussion of these studies.

Repeatedly, results have indicated that patients differ considerably with respect to the accuracy with which they can be assessed (Kostlan, 1954; Little and Schneidman, 1959). Any study attempting to judge the relative accuracy of varying assessment techniques, taking cognizance of this finding, would need to include target patients with dissimilar problems of varying personality type.

Another striking finding is that the tests (as used in these studies) have questionable validity. Agreement with the criterion measures has been rather low (Silverman, 1959; Sines, 1959). Intercorrelations among raters using the same test materials is
low and the reliability of individual raters is of low magnitude as well (Cooke, 1967; Little and Schneidman, 1959).

Halbower's (1955) study indicates that when comparing actuarial data with clinicians using a "rule of thumb" approach to interpreting MMPI profiles, the actuarial data surpasses the clinicians in a personality description task (154 item Q sort) by a wide margin. However, a study asking clinicians to employ tests along with actuarial data to make predictions and comparing these results with the predictions made by actuarial data alone has not yet been reported.

With the increasing availability of actuarial data pertinent to clinical assessment tasks, there is a need to know more about the relative accuracy of actuarial descriptions as compared with descriptions based on both actuarial information and additional diagnostic information available to the clinician. This study, similar in design to studies evaluation the relative contribution of various psychological tests to assessment procedures, investigates the following questions:

(1) Does adding diagnostic information about a patient to actuarial knowledge of the patient enhance the accuracy of the clinician's predictions, i.e., is he better able to describe the "unique" aspects of the patient or does use of this additional information in fact detract from the original accuracy of the actuarial description?
(2) What kind(s) of diagnostic information is most helpful in increasing accuracy? Which decreases accuracy?

(3) Does the amount of clinical experience of clinicians affect the accuracy of their descriptions?

(4) Will clinicians using the same combination of diagnostic and actuarial information deviate in their description from the actuarial description in the same direction: That is, will clinicians combining Rorschach information with the actuarial description agree more with each other than they will with clinicians combining MMPI or Personal History Schedule data with the actuarial description?
CHAPTER II

METHOD

General Outline of the Study

Consecutive admissions of adolescents (12-18 years old) to the Psychiatric Unit of the Ohio State University Hospitals were screened on the basis of their MMPI profiles to obtain four patients (females) whose profiles corresponded to groups of profiles available in a large pool of adolescent data on which extensive ratings have been done and actuarial descriptions could be generated. A Personal History Schedule, a Rorschach protocol, video and sound tapes of interviews and a social history were also obtained from each patient.

Thirty clinical psychologists (15 experienced and 15 inexperienced) chose one of three assessment conditions (Rorschach, MMPI, Personal History Schedule) and served as test judges (TJs) providing the basic data for study. Each TJ was given actuarial information about each of the four patients as well as diagnostic data specific to the assessment category of his choice. He completed ratings consisting of two multiple choice questionnaires and a Q
array of 108 phenotypic-genotypic statements developed by Marks (1961) and Marks and Seeman (1962). Before receiving information about the four cases, the TJs' completed descriptions of their stereotype of the "typical" emotionally disturbed female adolescent referred for treatment. Reliability data were obtained from each judge under each condition.

Twelve experienced psychotherapists provided criterion descriptions, which for each patient consisted of the average of three ratings independently compiled by the patient's therapist or therapist's supervisor and two other clinicians. Complete social histories, video tapes of initial interviews and audio tapes of the second and tenth interviews were available to these clinicians.

**Hypotheses**

Hypothesis I. Actuarial personality descriptions of emotionally disturbed adolescents will surpass the accuracy of descriptions based on both actuarial and individual diagnostic information.

a. Clinicians' descriptions based on actuarial information plus knowledge of a patient's Rorschach protocol will be less accurate than actuarial data alone.

b. Clinicians' descriptions based on actuarial information plus knowledge of a patient's MMPI profile will be less accurate than actuarial data alone.
c. Clinicians' descriptions based on actuarial information plus knowledge of a patient's Personal History Schedule will be less accurate than actuarial data alone.

Hypothesis II. Experienced clinicians' descriptions of emotionally disturbed adolescents based on actuarial plus individual diagnostic information will be more accurate than descriptions of the same adolescents made by inexperienced clinicians given the same data.

Hypothesis III. Correlations of patient Q descriptions among clinicians using the same combination of diagnostic and actuarial information will be greater than among clinicians using different combinations of diagnostic and actuarial information.

Hypothesis IV. Clinician's descriptions of emotionally disturbed adolescents based on both diagnostic and actuarial information will be more accurate than stereotype descriptions derived by the same clinicians.

The Target Patients

The patients participating in this study were drawn from a pool of adolescents who entered the Psychiatric Unit of the Ohio State University Hospitals between January and March of 1967 and met the requirements of this study. The requirements included that (a) the patient was between twelve and eighteen years of age,
Caucasian, and was not mentally retarded or deficient and showed no sign of organic brain damage; (b) a release of information form be obtained from the patient and his parents or guardian and that they agree to participate; (c) the patient completed the MMPI, Rorschach, and Personal History Data Schedule; (d) the patient's MMPI profile was similar in type to MMPI profiles available in a large pool of adolescent data on which extensive ratings had been made, and different from the profiles of other patients included in the study; (e) the patient was seen for psychotherapy and a video tape recording of the first interview and audio tape recordings of the second and tenth interviews or their equivalent were available.

These conditions proved to be stringent and by the end of three months only seven adolescents (two males and five females) were in the process of fulfilling the requirements. The target patients were chosen from this group. One female was eliminated because she was judged mentally retarded on the basis of an intelligence test subsequently administered. One male was eliminated because his MMPI profile pattern could not be type classified. Finally, only female patients were chosen so that stereotype information could be collected for a female stereotype alone.

The four adolescents participating in this study were Caucasian females, between thirteen and eighteen years of age.
whose MMPI profiles comprised the following high-point patterns:
Patient A, 4-8-6; Patient B, 8-4-2; Patient C, 6-8-9, Patient D, 9-4.

The MMPI and Personal History Schedule were obtained from the patients within a week after their admission. The Rorschach protocol was obtained from one to three weeks after admission. The social case history used by the criterion judges was compiled from the social history taken by the social worker and the social history taken by the fourth year medical student assigned to each case. For Patient A, video tape and audio tape interviews were simulated by the writer when the therapist refused to participate. Patient D eloped from the hospital shortly before her tenth therapy interview and therapist's and nurses' notes made just prior to the elopement were substituted for the tenth interview.

**Diagnostic Information Used in the Evaluative Tasks**

The test battery for each patient consisted of the following:

**MMPI.** The MMPI was administered by a psychometrist according to the standard instructions for the test. It is part of a routine screening battery and was administered before knowing whether or not the patient would qualify for the study. The profiles indicated both raw score and K-corrected (adult norms) values for the basic clinical scales and the three validity scales. The TJs were provided with this profile plus actuarial information for this rating condition.
Personal History Schedule. The Personal History Schedule (PHS) is a self administered objective questionnaire of 72 items developed by Marks for the Adolescent Personality Description Project (1967). It was administered at the same testing session as the MMPI. Its content covers "attitudes and feelings toward self, others, home, school, work, health, religion, dating and leisure time; ambitions and goals; and reaction to frustration and stress, plus a check list of 300 adjectives for self-description." TJs in this condition received a copy of the completed schedule plus actuarial information. (See Appendix B for a copy of the Personal History Schedule.)

Rorschach. The Rorschach Inkblot test was administered individually to each patient by a highly experienced Rorschach administrator who has worked extensively with children. A tape recording of the testing session was made and the protocol was transcribed from the tape by the writer. The TJs for this condition received a verbatim protocol including the administrator's instructions, questioning in the inquiry and a location chart drawn by the administrator as well as the actuarial information. A brief description of the administrator is given in Appendix D.

The Rorschach and MMPI were selected for use in this study because they are among the most commonly used personality
assessment techniques (Sundberg, 1961), and each offered a different methodological assessment approach. The PHS was chosen because it is a brief self-administered questionnaire which gives case history information from the adolescent's own point of view. Sines (1959) used biographical information as one source of diagnostic data and found that it "held its own relative to other data: and was a "promising source of information in assessing personality characteristics of psychiatric patients" (Sines, 1959, p. 492).

Method of Evaluation

In order to make comparisons among the criterion judges, actuarial data and the test judges, the evaluation of each target patient was completed in the following way.

The Q array, developed by Marks (1961) and Marks and Seeman (1962), which consists of 108 genotypic-phenotypic items was used as one measuring instrument. The criterion judges were asked to sort the statements into a nine category (from "least" to "most" descriptive) rectangular distribution with 12 statements in each category. When the item placements for the three criterion judges were arithmetically averaged to form the criterion Q array, a Q distribution more closely approximating normal was obtained. The actuarial Q descriptions, being an arithmetical average of
seven or eight Q descriptions, had distributions which approximated a normal distribution. The TJs were given the average item placements and instructed that they could alter the placement of items to achieve a better description of the target patients. (See Appendix C for list of Q statements.)

The Past and Present Life Questionnaire (PPLQ) consisted of 24 multiple-choice items of a more or less factual nature about a person's past and present life. The items for this questionnaire were taken from Marks' Case Data Schedule which was developed for the Adolescent Personality Description Project (Marks, 1967). Both the test judges and the criterion judges were asked to choose only one alternative for each item. (See Appendix C).

The Mental Status Questionnaire (MSQ) consists of 23 multiple-choice items representing areas usually considered part of a mental status exam (taken from Marks, 1967). Again, test judges and criterion judges were instructed to choose only one alternative for each multiple-choice item. (See Appendix D.)

The Actuarial Information

The actuarial data used in this study were drawn from a pool of ratings collected for the Adolescent Personality Description Project (Marks, 1967). These data had been collected independent
of knowledge of the patients' MMPI profiles and represent psycho-
therapists' ratings of patients seen in over 70 different settings
throughout the United States.

The actuarially combined Q descriptions of the target patients
were an arithmetical average of the Q sorts of therapists rating
seven or eight adolescent patients with MMPI profiles highly
similar in pattern to those of each of the target patients. The
judgments of profile similarity were made by Philip A. Marks who
has had considerable experience in grouping MMPI profiles in this
manner.

The Q sorts comprising the actuarially derived descriptions
were obtained from clinicians who had been the therapists of these
particular patients. Each clinician had sorted the Q items accord-
ing to the manner in which his particular patient presented herself
following a minimum of 10 therapy interviews. The sorts were
based on therapy notes plus all other information available to the
therapist (i.e., informant reports, to social history, and test in-
formation other than knowledge of the MMPI).

The actuarial questionnaire data were selected by the same
method as the Q-array data and in each case represented the
ratings of seven or eight therapists who rated patients similar in
MMPI profile configuration to the target patient. These ratings
were tallied and a percentage of endorsement for each multiple-choice item alternative was actuarially assigned. These percentages were listed next to the item alternative on the rating sheet for the TJs.

**Criterion Judges and the Criterion Ratings**

Twelve psychotherapists provided the criterion descriptions of the four target patients. Three psychotherapists served as criterion judges (CJs) for each target patient. For Patients B and C, the patient's therapist (a psychology intern at the facility) and two experienced psychotherapists reviewed complete social histories (obtained from social worker's case histories and fourth year medical students' case histories as available), video tapes of the initial interviews and audio tapes of the second and tenth interviews. For Patient A, the supervisor of the patient's therapist (a third year resident in psychiatry) and two experienced psychotherapists reviewed a complete social history (as described above), a video tape of the simulated first interview and audio tapes of simulated second and tenth interviews with the therapist. For Patient D, the supervisor of the patient's therapist and two experienced psychotherapists acted as criterion judges and reviewed the same material described for Patients B and C, except that nurses' and the therapist's notes of the patient's behavior just prior
to her elopement were substituted for the audio tape of the tenth interview.

Of the psychotherapists serving as CJs, seven were Ph.D. clinical psychologists (five of whom were diplomates), three were psychiatrists, and two were third year clinical psychology interns. (See Appendix A.)

In all cases, the Mental Status Questionnaire was completed after the CJ had read the complete social history and viewed the video tape of the patient's initial interview. The Q Description of the patient and the Past and Present Life Questionnaire were completed after reviewing all the available information. Each criterion judge made his ratings independently. None of the CJs had access to the test information or the actuarial information for the particular patient he was rating.

The independently derived Q descriptions of each group of CJs were intercorrelated and an average of the three Q sorts was used as the criterion description. The independent questionnaire ratings of each group of CJs were also tallied, averaged, and formed the criterion questionnaire data.

Although no formal method for determining the validity of the criterion is available, the use of skilled clinicians, the reliance on more than one clinician's judgment, and the use of many
modalities of evidence upon which to base the CJs judgments, were all procedures designed to reduce distortions of the individual judge and allow for the most accurate portrayal of the patient that was possible. The criterion judges are seen as validity indicators who are used collectively as criterion measures.

**The TJs and the TJs' Task**

Fifteen highly experienced clinicians (Ph.D. - level clinical psychologists with an average of seven years of postdoctoral experience) and 15 relatively inexperienced clinicians (third and fourth year clinical psychology students) served as TJs. (See Appendix A.) Five experienced TJs and five inexperienced TJs comprised each of the three assessment conditions (Rorschach, MMPI, and Personal History Schedule).

The TJs were selected by contacting a number of clinical psychologists and clinical psychology graduate students, briefly outlining the proposed research, and inviting their participation. From the pool of responding clinicians, each psychologist who agreed to participate was placed in the assessment condition of his preference. (More than two-thirds of those contacted chose to participate in the study and an equal number of TJs chose to participate in each category.)
Before each TJ was given his assessment task, he used the rating instruments to describe his stereotype conception of the "typical (or average) Caucasian female between thirteen and eighteen years of age seen in an inpatient psychiatric setting, who is not mentally retarded or deficient and shows no sign of organic brain damage".

Approximately two weeks later, the TJs received the instructions for the patient evaluations together with the diagnostic and actuarial information for the particular rating condition for each of the four cases. The order in which the TJs rated the cases was constantly varied. (See Appendix D for the instructions given the TJs.) When these ratings were returned, the TJs were sent new materials and asked to re-rate the second case that they had rated in the same manner in which they had completed the initial rating.

In summarizing the procedure, 10 TJs were given Rorschach protocols and actuarial data for the four target patients; 10 TJs were given the Personal History Schedule and actuarial data; and 10 TJs were given the MMPI profile and actuarial data. Each TJ completed ratings on each subject using the information given him. Stereotype descriptions were also completed by the TJs, and each TJ re-evaluated his second case to provide reliability estimates. It was
stressed that the study is interested in evaluating the clinician's ability to describe the unique aspects of the four adolescents' functioning which may have been incorrectly described by the actuarial data.

Data Analyses

Parametric and nonparametric techniques were used to compare the actuarial and the TJs' descriptions with the criterion descriptions for the four target patients. The Q sorts were intercorrelated using the Pearson r. Fisher's $z'$ transformation was used in the analyses of these data.

The questionnaire data were analyzed in the following manner. The criterion data for each question took one of three possible forms: (a) complete agreement among the CJs on one multiple-choice alternative; (b) agreement of two CJs on one alternative with the third CJ choosing another alternative; (c) all three CJs endorsing different alternatives. The actuarial questionnaires and the TJs' questionnaires were matched with the criterion. For each question, when the TJ endorsed an alternative that was also endorsed by at least two of the three CJs, his rating of that item was assigned a weight of zero. When the TJ endorsed an alternative chosen by only one CJ, his rating for that item was
assigned unit weight. When the TJ endorsed an alternative not chosen by the CJs, his rating was assigned a weight of two. The same procedure was followed in comparing the actuarial questionnaire data with the criterion questionnaire for each target patient. The alternative with the highest percentage of actuarial endorsement was compared with the CJs' ratings. When the alternative with the highest percentage of actuarial endorsement coincided with the multiple-choice alternative selected by two or all three of the CJs, the actuarial condition was given the weight of zero for that item. When this actuarial alternative agreed with one CJ, it was assigned unit weight; when there was complete disagreement, a weight of two was assigned.

The weightings for all items of the questionnaire were then totaled for both the actuarial condition alone and the diagnostic conditions. These totals were compared. The lower the total, the greater the agreement with the criterion questionnaire. The difference between the totals for the actuarial questionnaire and for each TJ were obtained using each questionnaire for each of the four target patients. These differences were analyzed using a 2x3x4 factorial analysis of variance design. The differences between the TJs' ratings totals and the TJs' stereotype totals were also compared in this manner.
The sign test was also used in comparing each TJ's total weights with the actuarial total for each questionnaire.
CHAPTER III

RESULTS

Reliability Data

Reliability of the CJ's Descriptions

The criterion Q descriptions of the three CJ's were intercorrelated for each of the four patients. The intercorrelations across patients ranged from .48 to .76. Table 1 reports intercorrelations of the CJ's descriptions for each patient. The reliability of the composite Q description for each patient was determined using the Spearman-Brown formula. The pooled ratings of the CJ's were higher than the ratings of any single CJ. If these reliability coefficients are taken as estimates of true score variance to total variance, it would appear that the composites have less error in measuring this hypothetical "true" score than any single CJ's description.
TABLE 1

INTERCORRELATIONS OF CJs DESCRIPTIONS AND RELIABILITY OF THE COMPOSITE FOR THE FOUR TARGET PATIENTS

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(r = .61)</td>
<td>(r = .75)</td>
<td>(r = .63)</td>
</tr>
<tr>
<td></td>
<td>(r = .60)</td>
<td>(r = .76)</td>
<td>(r = .72)</td>
</tr>
<tr>
<td></td>
<td>(r = .48)</td>
<td>(r = .71)</td>
<td>(r = .55)</td>
</tr>
<tr>
<td>(r_{av.} = .56)</td>
<td>(r_{av.} = .75)</td>
<td>(r_{av.} = .64)</td>
<td>(r_{av.} = .67)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reliability</th>
<th>Reliability</th>
<th>Reliability</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>of Composite</td>
<td>of Composite</td>
<td>of Composite</td>
<td>of Composite</td>
</tr>
<tr>
<td>= .79</td>
<td>= .90</td>
<td>= .84</td>
<td>= .86</td>
</tr>
</tbody>
</table>

The reliability of the criterion questionnaires cannot be formally established. However, for the Past and Present Life Questionnaire which consisted of 24 items, two of the three CJs agreed on 20 or more items for each of the target patients. The Mental Status Questionnaire consisted of 23 items and, in this case, 19 or more items were agreed upon by at least two of the three CJs. Thus, there was fairly good agreement among the CJs in their answers to these questionnaires. Only on four or less items was there complete disagreement among the CJs descriptions of a particular target patient.
Reliability of the TJ's Descriptions

Reported in this section are comparisons of the descriptions made by each TJ on the basis of the second set of data he evaluated and the descriptions made when the same set of data was re-evaluated. In completing their re-ratings, the TJs were instructed to follow the same procedure as they had in their initial evaluation. Each TJ was given the re-rating materials one week after the completion of his initial ratings. The time between ratings varied, although a majority of the re-evaluations were done within three weeks of the original ratings. The median number of days between evaluation and re-evaluation was 14 days.

Table 2 presents product-moment correlations between Q sorts of the first and second evaluation of the same data for each TJ. The average correlation for each case and for each rating group is also given. The Q-sort reliability figures vary from \( r = .34 \) to \( .98 \), with an overall average \( r \) of \( .74 \) for all of the TJs combined. The reliability of the descriptions within and across the various assessment conditions varies considerably. Reliability appears to depend more on the individual rater than the assessment condition to which he was assigned. The patients were rated with equal reliability. The inexperienced (I) TJs appear to be slightly more reliable than the experienced (E) TJs in their sort-resort descriptions.
TABLE 2
Q-SORT RELIABILITY FOR THE 30 TJs
(PRODUCT-MOMENT CORRELATIONS)

<table>
<thead>
<tr>
<th>Patient</th>
<th>Rorschach</th>
<th>MMPI</th>
<th>PDS</th>
<th>Mean r for each Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>A</td>
<td>.80</td>
<td>.88</td>
<td>.89</td>
<td>.47</td>
</tr>
<tr>
<td></td>
<td>.79</td>
<td>.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>.86</td>
<td>.81</td>
<td>.58</td>
<td>.75</td>
</tr>
<tr>
<td></td>
<td>.56</td>
<td>.90</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>.51</td>
<td>.74</td>
<td>.82</td>
<td>.34</td>
</tr>
<tr>
<td></td>
<td>.80</td>
<td>.86</td>
<td></td>
<td>.40</td>
</tr>
<tr>
<td>D</td>
<td>.61</td>
<td>.40</td>
<td>.64</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.98</td>
<td>.66</td>
<td>.75</td>
</tr>
<tr>
<td>Mean r</td>
<td>.74</td>
<td>.78</td>
<td>.76</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total a mean r = .72
Total TJ mean r = .74
a Experienced TJs
b Inexperienced IJs

The reliability data for the Mental Status Questionnaire are presented in Table 3. The figures given are the percentages of matches between the item alternatives chosen by the TJ in his two evaluations. Overall, the TJs agreed on 63 percent of their responses to the Mental Status Questionnaire in the two successive ratings of the same case. Patient C was the most reliably rated patient. The percentage of items endorsed in the same manner on two successive ratings varied from 30 percent to 83 percent.
TABLE 3
MENTAL STATUS RELIABILITY FOR
THE 30 TJs
(PERCENTAGE AGREEMENT)

<table>
<thead>
<tr>
<th>Patient</th>
<th>Rorschach</th>
<th>MMPI</th>
<th>PDS</th>
<th>Mean % for each patient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E I</td>
<td>E I</td>
<td>E I</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>74 74</td>
<td>35 65</td>
<td>52</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>70 74</td>
<td>35 61</td>
<td>78 30</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>44 70</td>
<td>70 83</td>
<td>70</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>78 56</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>44 78</td>
<td>74 61</td>
<td>52</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>70 39</td>
<td>59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mean % 62 70 55 66 63 58

Total E mean % = 60
Total I mean % = 65
Total TJ mean % = 63

The reliability data for the Past and Present Life Questionnaire are presented in Table 4. The ratings made with this questionnaire were slightly more reliable (71 percent agreement between first and second evaluations) than the ratings made with the Mental Status Questionnaire. This questionnaire also contained items of a more factual nature. Again, the I TJs are slightly more reliable than the E TJs. This was true for all conditions.
TABLE 4

PAST AND PRESENT LIFE RELIABILITY
FOR THE 30 TJs
(PERCENTAGE AGREEMENT)

<table>
<thead>
<tr>
<th>Patient</th>
<th>Rorschach</th>
<th>MMPI</th>
<th>PDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E E I I I</td>
<td>E E I I</td>
<td>E E I I</td>
</tr>
<tr>
<td>A</td>
<td>83 75 58 58 83</td>
<td>88 58</td>
<td></td>
</tr>
<tr>
<td></td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>75 88 46 75 92 67</td>
<td>62 71 72</td>
<td></td>
</tr>
<tr>
<td></td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>42 58 92 58 88</td>
<td>71 58 92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>92 62 67 54 71</td>
<td>83 58</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean %</td>
<td>72 74 63 68 69 78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total E Mean % = 68
Total I Mean % = 73
Total TJ Mean % = 71

In summary, the reliability coefficient of the Q sorts ranged from .34 to .98 with an overall mean of .74. There was an overall rate-rerate agreement of 63 percent for the items on the Mental Status Questionnaire. The ratings made using the Past and Present Life Questionnaire were slightly more reliable with a percentage agreement of 71 percent. There was wide variation in reliability which cut across the type of diagnostic materials used and the type of
diagnostic materials used and the type of patient being described. The inexperienced TJs were slightly more reliable than the experienced TJs in all conditions.

Results of Testing the Hypotheses

Hypothesis I

Hypothesis I posited that the personality descriptions derived from actuarial data would describe adolescent patients more accurately than descriptions made by the TJs using the actuarial data plus additional diagnostic information. This hypothesis was tested for each of the three rating procedures.

Q Descriptions. The first hypothesis was tested by correlating the actuarial Q descriptions and the TJ Q descriptions with the appropriate criterion Q descriptions. These product moment correlation coefficients were then transformed to Fisher's $z'$ equivalents (Edwards, 1954) and averaged. In Column I of Table 5 are entered the mean correlations (after transformation) with the criteria of the actuarial Q descriptions. These correlations ranged from .29 to .56 with an average of .49. For comparative purposes, the mean correlations with the criteria (validity coefficients) for the Q descriptions of the 30 TJs are entered in column 2.
<table>
<thead>
<tr>
<th></th>
<th>Average Validity Coefficient of Actuarial Q sorts</th>
<th>Average Validity Coefficient of TJs Q sorts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient A</td>
<td>.53</td>
<td>.47</td>
</tr>
<tr>
<td>Patient B</td>
<td>.56</td>
<td>.51</td>
</tr>
<tr>
<td>Patient C</td>
<td>.56</td>
<td>.56</td>
</tr>
<tr>
<td>Patient D</td>
<td>.29</td>
<td>.30</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td><strong>.49</strong></td>
<td><strong>.46</strong></td>
</tr>
</tbody>
</table>

To test Hypothesis I, the significance of the difference
between z' equivalents of the mean correlation coefficients reported
in Column 1 and 2 was tested.

Applying a two-tailed test of significance, the overall dif-
ference between the accuracy of the actuarial and TJs Q descriptions
is not significant. The difference between these two assessment
procedures for each of the target patients is also not significant.
The actuarial Q descriptions were slightly more accurate overall
and in describing Patient A and Patient B. For Patients C and
D the TJs' clinically synthesizing actuarial and diagnostic information,
as compared with the actuarial data alone, were able to match the
criterion Q description with equal accuracy.
The magnitude of all r's is significantly greater than zero. However, the actuarial and TJs Q descriptions for target patients A, B and C correlated more highly (p<.001) with the criterion than did the actuarial and TJs descriptions for Patient D (p<.01).

The sign test (Siegal, 1956), which uses plus and minus signs rather than quantitative measures, was also used to examine these data. In this case, each time the actuarial description correlated more highly with the criterion than the TJ's description for a particular patient, a plus was scored. Each time the TJ's validity coefficient exceeded the magnitude of the actuarial validity coefficient, a minus was tallied. If there was no difference between the two methods we would expect about half of the differences to be negative and half of the differences to be positive. The TJs descriptions were more accurate than the actuarial descriptions in 65 of the 120 comparison, which was not significant. (See Table 6.)
TABLE 6

SIGN TEST FOR DIFFERENCE IN ACCURACY OF THE ACTUARIAL AND TJs' Q DESCRIPTIONS

<table>
<thead>
<tr>
<th></th>
<th>N times actuarial r with criterion exceeded TJs' r</th>
<th>N times TJ r with criterion exceeded actuarial r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient A</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Patient B</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Patient C</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Patient D</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>65</td>
</tr>
</tbody>
</table>

It would appear that the TJs did slightly better qualitatively while the actuarial data did slightly better quantitatively. This would suggest that although the TJs were able to describe the patients slightly more accurately than the actuarial data (58% of the time), when the clinician erred, the margin of error was so great that the actuarial Q descriptions yielded more accurate results with greater consistency. In summary, using the Q sort as a modality of description, no overall difference were found between the TJs and the actuarial data.

Mental Status Questionnaire. The questionnaires were analyses in the manner described in Chapter Two. To review briefly, each TJ's questionnaire and each actuarial questionnaire was compared with the composite criterion questionnaire. Complete
agreement on an individual item alternative was assigned zero weight, agreement with one criterion judge was assigned unit weight, and total disagreement was assigned a weight of two. The weights for individual items were totaled and the grand totals for each TJ's questionnaire and for each actuarial questionnaire were obtained. The lower the total score, the more the TJ or the actuarial data agreed with the criterion measure. Each TJ's total score was compared with the corresponding actuarial total score by subtracting the latter from the former. The difference scores were then analysed using a 2x3x4 factorial analysis of variance design. In Table 7, A represents the two levels of TJ experience, B represents the three TJ diagnostic conditions and C represents the four target patients. For each target patient there were five TJs in each of six treatment cells. Overall, there were 24 cells with the difference scores of five TJs in each cell.
TABLE 7

ANALYSIS OF VARIANCE FOR THE DIFFERENCE SCORES BETWEEN TJ AND ACTUARIAL DESCRIPTIONS USING THE MENTAL STATUS QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience (A)</td>
<td>.008</td>
<td>1</td>
<td>.008</td>
<td>.0004</td>
</tr>
<tr>
<td>Diagnostic Information (B)</td>
<td>66.450</td>
<td>2</td>
<td>33.225</td>
<td>1.669</td>
</tr>
<tr>
<td>Target Patient (C)</td>
<td>615.091</td>
<td>3</td>
<td>205.030</td>
<td>10.298a</td>
</tr>
<tr>
<td>AxB</td>
<td>16.817</td>
<td>2</td>
<td>8.408</td>
<td>.422</td>
</tr>
<tr>
<td>AxC</td>
<td>55.761</td>
<td>3</td>
<td>18.587</td>
<td>.934</td>
</tr>
<tr>
<td>BxC</td>
<td>40.484</td>
<td>6</td>
<td>6.747</td>
<td>.339</td>
</tr>
<tr>
<td>AxBxC</td>
<td>92.334</td>
<td>6</td>
<td>15.389</td>
<td>.773</td>
</tr>
<tr>
<td>Within groups</td>
<td>1911.380</td>
<td>96</td>
<td>19.910</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2798.325</td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a p < .001

To test whether the TJs were less accurate than the actuary in describing the four target patients the C row totals (total of difference scores between the actuarial and TJs' rating the four patients) were examined. Negative totals would indicate that the TJs were more accurate than the actuarial descriptions while positive totals would indicate that the actuarial descriptions surpassed the TJs in matching the criterion description. (See Table 8.)
TABLE 8

t TESTS OF THE C ROW
TOTALS OF THE ANALYSIS OF VARIANCE PRESENTED
IN TABLE 7

<table>
<thead>
<tr>
<th>C row totals</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1 (Patient A)</td>
<td>-24</td>
</tr>
<tr>
<td>C-2 (Patient B)</td>
<td>1</td>
</tr>
<tr>
<td>C-3 (Patient C)</td>
<td>74</td>
</tr>
<tr>
<td>C-4 (Patient D)</td>
<td>150</td>
</tr>
</tbody>
</table>

a p < .01
b p < .001

A t test (t = \( T - O \sqrt{N MSError} \)) for the significance of the difference of the C totals from zero indicates that the actuarial descriptions were significantly superior to the TJs' in describing Patients C and D (p < .01) while there is little difference between the two approaches in describing Patient B; and the TJs are slightly superior to the actuarial data in describing Patient A, though not significantly so. Overall, the actuary did better than the clinicians although not consistently so across the four patients.

A sign test of the difference between the actuarial and the TJs' descriptions was also computed. The TJs totals were compared with the total score for the actuarial data for each target patient. When the actuarial total score was less than the TJ total (i.e.,
when the actuarial data was in greater agreement with the composite criterion Mental Status Questionnaire), a plus was assigned. When the TJ's total score was less than the actuarial data, minus was assigned.

**TABLE 9**

**SIGN TEST OF THE ACCURACY OF ACTUARIAL AND TJs' MENTAL STATUS QUESTIONNAIRE**

<table>
<thead>
<tr>
<th></th>
<th>Actuarial total less than TJ total (+)</th>
<th>TJ total less than actuarial total (-)</th>
<th>Equal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient A</td>
<td>13</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Patient B</td>
<td>13</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Patient C</td>
<td>24 a</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Patient D</td>
<td>28 a</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78 a</strong></td>
<td><strong>38</strong></td>
<td><strong>4</strong></td>
</tr>
</tbody>
</table>

a p < .001

Table 9 shows that the actuarial descriptions were significantly more accurate than the TJs' descriptions for Patients C and D, concurring with the previous analysis. The difference between the two approaches was not significant for Patients A and B. Overall, the actuarial descriptions were superior to the TJs in this assessment task.

**Past and Present Life Questionnaire.** The analysis of variance data for the Past and Present Life Questionnaire are presented in Table 10. As in the analysis of the Mental Status Question-
naire, a significant source of variance was attributed to the target patients indicating that some target patients were more difficult to describe than others.

**TABLE 10**

**ANALYSIS OF VARIANCE FOR THE DIFFERENCE SCORES BETWEEN TJ AND ACTUARIAL DESCRIPTIONS USING THE PAST AND PRESENT LIFE QUESTIONNAIRE**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience (A)</td>
<td>28.033</td>
<td>1</td>
<td>28.033</td>
<td>2.159</td>
</tr>
<tr>
<td>Diagnostic Information (B)</td>
<td>123.266</td>
<td>2</td>
<td>61.633</td>
<td>4.747 a</td>
</tr>
<tr>
<td>Target Patient (C)</td>
<td>376.466</td>
<td>3</td>
<td>125.489</td>
<td>9.666 b</td>
</tr>
<tr>
<td>AxB</td>
<td>27.288</td>
<td>2</td>
<td>13.634</td>
<td>1.049</td>
</tr>
<tr>
<td>AxC</td>
<td>78.701</td>
<td>3</td>
<td>26.234</td>
<td>2.021</td>
</tr>
<tr>
<td>AxC</td>
<td>21.935</td>
<td>6</td>
<td>3.656</td>
<td>.282</td>
</tr>
<tr>
<td>AxBxC</td>
<td>23.998</td>
<td>6</td>
<td>4.000</td>
<td>.308</td>
</tr>
<tr>
<td>Within groups</td>
<td>1246.400</td>
<td>96</td>
<td>12.983</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1925.867</strong></td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a p < .05  
b p < .001

To determine whether the actuarial questionnaire descriptions were better able to describe the target patients than the TJ descriptions, the C row totals of the analysis of variance were examined. If the actuarial descriptions and the TJ descriptions for a particular patient were in equal agreement with the criterion, the sum of the deviations would equal zero. A negative total would indicate that the TJs were superior to the actuarial data, while a positive total would indicate that the actuarial descriptions were superior to the TJs.
### TABLE 11

**t TESTS OF SIGNIFICANCE OF THE C ROW TOTALS OF THE ANALYSIS OF VARIANCE PRESENTED IN TABLE 10**

<table>
<thead>
<tr>
<th>C row total</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient A</td>
<td>105</td>
</tr>
<tr>
<td>Patient B</td>
<td>-11</td>
</tr>
<tr>
<td>Patient C</td>
<td>4</td>
</tr>
<tr>
<td>Patient D</td>
<td>-34</td>
</tr>
</tbody>
</table>

a $p < .001$

To test for significance of the difference between the C row totals (the sum of the difference scores between the actuarial data and the TJs for each target patient) from zero, a t test was used. The actuarial description for Patient A matched the criterion description with significantly greater accuracy ($p < .001$) than the TJs' descriptions. Patient B and Patient D were described slightly more accurately by the TJs than by the actuarial data alone. There was no difference between the actuarial description and the TJs' descriptions of Patient C. Overall, there was no significant difference in the accuracy of the two approaches in describing the patients using the Past and Present Life Questionnaire by this analysis, although Patient A was described with significantly greater accuracy by the actuarial data.
The sign test was also used to analyse the Past and Present Life Questionnaire data. Again, when the actuarial description exceeded the accuracy of a TJ's description (i.e., the total weighted score for the actuarial questionnaire was less than the total weighted score of the TJ questionnaire), a plus was assigned. When a TJ's description agreed more with the criterion questionnaire than the actuarial description, a minus was assigned. The pluses and minuses were tallied for all 120 comparisons between the TJ's and the actuarial descriptions.

**TABLE 12**

**SIGN TEST FOR THE DIFFERENCE IN ACCURACY OF ACTUARIAL AND TJ PAST AND PRESENT LIFE QUESTIONNAIRE**

<table>
<thead>
<tr>
<th></th>
<th>Actuarial total less than TJ</th>
<th>TJ total less than actuarial</th>
<th>Equal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>total (+)</td>
<td>total (-)</td>
<td></td>
</tr>
<tr>
<td>Patient A</td>
<td>23 a</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Patient B</td>
<td>12</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Patient C</td>
<td>16</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Patient D</td>
<td>10</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>46</td>
<td>13</td>
</tr>
</tbody>
</table>

a \( p < .001 \)

It can be seen from Table 12 that only five of the 30 TJ's were able to surpass the accuracy of the actuarial description for Patient A while there is little difference between the two groups for the other patients. This finding is consistent with the parametric analysis reported above.
In summary, the first hypothesis stated that actuarial personality descriptions would surpass the accuracy of personality descriptions based on both actuarial and diagnostic information. This hypothesis was tested for the three instruments of comparison using both parametric and non-parametric statistical techniques. The results indicate that there is no overall difference between the two assessment procedures using the Q sort as the modality of description. Using the Mental Status Questionnaire, the actuarial descriptions were more in agreement with the criterion measures than the TJs descriptions. There was no overall difference between the two assessment procedures using the Past and Present Life Questionnaire, although Patient A was described with significantly greater accuracy by the actuarial description than by the TJs. For individual patients the actuarial descriptions significantly surpassed the accuracy of the TJs descriptions, but the same patients were not always described more accurately across the three instruments used. It appears that when the TJ errs, his errors are significantly greater than the errors of the actuarial data.

**Hypotheses Ia, Ib, and Ic**

Hypotheses Ia through Ic were concerned with the effect of different kinds of diagnostic information used by the TJs. The
question raised by these hypotheses was: Do TJs provided with
different types of diagnostic information describe patients more or
less accurately?

Q Descriptions. The TJS' Q descriptions and the actuarial
Q descriptions were correlated with the appropriate criterion
descriptions for each case. The product-moment correlation coeffi-
cients obtained were transformed to z' and the average z' computed
for the three groups of TJs (those using MMPI data, Rorschach data
and PHS data). The actuarial Q correlations were also transformed
to z' and averaged so that an overall z' for the actuarial data was
available. The validity coefficients of the Q sorts for each group of
10 TJs and for the actuarial Q sorts averaged across the four target
patients are given in Column 1 of Table 13.

TABLE 13

AVERAGE VALIDITY COEFFICIENTS OF
THE ACTUARIAL AND TJS' Q SORTS
FOR EACH DIAGNOSTIC CONDITION

<table>
<thead>
<tr>
<th>Diagnostic Condition</th>
<th>Average</th>
<th>Actuarial</th>
<th>MMPI</th>
<th>Rorschach</th>
<th>PHS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>z'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actuarial</td>
<td>.49</td>
<td>.536</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMPI</td>
<td>.49</td>
<td>.536</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rorschach</td>
<td>.44</td>
<td>.472</td>
<td>.064</td>
<td>.064</td>
<td></td>
</tr>
<tr>
<td>PHS</td>
<td>.47</td>
<td>.510</td>
<td>.026</td>
<td>.026</td>
<td>-.038</td>
</tr>
</tbody>
</table>

The z' scores were also used in testing the significance of
the difference between the actuarial validity coefficient and the
validity coefficients of the three groups of TJs using differing kinds of diagnostic data. The difference between the average r's of the TJs in each was also compared. It can be seen that none of the r's of the groups differed significantly from the actuarial r or from each other. TJs using Rorschach data and PHS data as sources of additional information, tended to be slightly less accurate than the actuarial data alone in describing the target patients. There was no difference between the group of TJs using MMPI data and the actuarial description alone. The group of TJs using Rorschach information was the least accurate of the three TJ groups, although the difference is not significant.

The sign test was also employed in the data analyses. The validity coefficients of the actuarial Q descriptions were compared with the validity coefficients of the TJs' descriptions across the four target patients. When the actuarial r was higher than the TJ's r, a plus was assigned; when the TJ's r was higher, a minus was assigned. The total of plus and minus scores for the TJs in each condition was tallied.
TABLE 14

SIGN TEST FOR DIFFERENCE IN ACCURACY
OF ACTUARIAL AND TJ Q SORTS FOR EACH
DIAGNOSTIC CONDITION

<table>
<thead>
<tr>
<th>Diagnostic Information</th>
<th>N times actuarial r exceeds TJ s r (+)</th>
<th>N times actuarial r is less than TJ s r (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rorschach</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>MMPI</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>PHS</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

The TJ s using the MMPI information surpassed the actuary 23 out of 40 times, a non-significant difference. The PHS TJ s were more accurate than the actuarial description 20 times and less accurate 20 times. The Rorschach TJ s were more accurate than the actuarial description 22 of 40 times. Comparing these results with the previous parametric analysis, it appears that when the TJ s descriptions were in error, the error was so great that the actuarial descriptions yielded more accurate results with greater consistency.

**Mental Status Questionnaire.** An examination of the analysis of variance summary table (See Table 7) reveals that the variance contributed by the type of diagnostic information used by the TJ s was not a significant source of variation. The three groups of 10 TJ s using differing kinds of diagnostic information did not differ
significantly from each other in their ability to describe the target patients using the Mental Status Questionnaire.

To determine whether each group of TJs was significantly less accurate than the actuarial information, the B column totals of the analysis of variance were tested for significance of the difference of each total from zero. The results of these t tests are given in Table 15.

**TABLE 15**

<table>
<thead>
<tr>
<th>Diagnostic Information</th>
<th>B column totals</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1 (Rorschach)</td>
<td>107</td>
<td>3.79 b</td>
</tr>
<tr>
<td>B-2 (PHS)</td>
<td>36</td>
<td>1.24</td>
</tr>
<tr>
<td>B-3 (MMPI)</td>
<td>58</td>
<td>2.06 a</td>
</tr>
</tbody>
</table>

a \( p < .02 \)

b \( p < .001 \)

A two-tailed test of significance was applied. It can be seen that the B column totals for each of the three groups was greater than zero, indicating that all TJ groups described the target patients less accurately than the actuarial description. However, the TJ group using Rorschach was significantly less accurate than the actuarial data \( p < .001 \), and the TJ group using the MMPI was
also significantly less accurate than the actuarial descriptions (p < .02). The TJs using PHS data were the most accurate of the three groups of TJs using the Mental Status Questionnaire.

**Past and Present Life Questionnaire.** The analysis of variance used to test Hypothesis I also supplies information pertinent to the relative accuracy of the descriptions made by the three groups of 10 TJs who used the Rorschach, MMPI and the PHS. Referring to Table 10, the F test for the B variable (type of diagnostic information used by the TJs) is significant (p < .05) indicating that the type of diagnostic information used by the TJs was a factor influencing the accuracy of the descriptions of the target patients. To examine this significant main effect, the Newman-Keuls procedure (Winer, 1962) was used as reported in Table 16.

**TABLE 16**

**NEWMAN-KEULS TEST FOR SIGNIFICANCE OF DIFFERENCES AMONG THE TJ GROUPS**

<table>
<thead>
<tr>
<th>Diagnostic Information</th>
<th>B column totals</th>
<th>B-1</th>
<th>B-2</th>
<th>B-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-2 (PHS)</td>
<td>-34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-3 (MMPI)</td>
<td>36</td>
<td>-70 a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-1 (Rorschach)</td>
<td>62</td>
<td>-96 b</td>
<td>-26</td>
<td></td>
</tr>
</tbody>
</table>

a p < .05  
b p < .01
The group of 10 TJs using the Personal History Schedule (PHS) were significantly more accurate than the TJ groups using either the Rorschach or the MMPI in evaluating the target patients. This finding supports the content validity of the PHS which contained case history information given by the patients themselves.

To test for a difference in accuracy between each group of TJs and the actuarial data, a t test was used (Table 17). If the actuarial data and a group of TJs had been equally able to describe the target patients, the total for that particular column should be equal to zero. A positive total indicates that the TJ group was less accurate in their descriptions than the actuarial data. A negative total indicates that the TJs were more accurate in their descriptions than the actuarial description. The Rorschach group was significantly less accurate than the actuarial data (p < .02, two-tailed test), while the other two groups were not significantly less accurate than the actuarial data. Applying a two-tailed test of significance for the t of the PHS group indicates that while this group exceeded the accuracy of the actuarial data, the greater accuracy was not significant (< 20 p > .10).
TABLE 17

t TESTS OF SIGNIFICANCE OF THE B COLUMN TOTALS OF THE ANALYSIS OF VARIANCE PRESENTED IN TABLE 10

<table>
<thead>
<tr>
<th>Diagnostic Information</th>
<th>B column totals</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1 (Rorschach)</td>
<td>62</td>
<td>2.72 b</td>
</tr>
<tr>
<td>B-2 (PHS)</td>
<td>-34</td>
<td>-1.49 a</td>
</tr>
<tr>
<td>B-3 (MMPI)</td>
<td>36</td>
<td>1.58</td>
</tr>
</tbody>
</table>

a p < .20 > .10
b p < .02

In summary, Hypotheses Ia through Ic were concerned with the effect of the type of diagnostic information used by the TJs on the accuracy of their ratings. The results of testing hypothesis Ia for the three instruments of comparison indicate that the group of the TJs using the Rorschach information was consistently less accurate in their descriptions than the actuarial data. They were significantly less accurate in describing the target patients using the Mental Status Questionnaire (p < .001) and the Past and Present Life Questionnaire (p < .02). In comparison with the other two groups of TJs, the TJs using Rorschach information were the least accurate in their descriptions. However, the difference between the three groups is not significant except using the Past and Present Life Questionnaire.
Hypothesis Ib stated that the MMPI TJ group would be less accurate than the actuarial data in their descriptions. Testing this hypothesis it was found that the MMPI group was equal to the actuarial descriptions using the Q sort. They were less accurate than the actuarial data using the Past and Present Life Questionnaire. However, only once (using the Mental Status Questionnaire) was the group significantly less accurate (p < .02) than the actuarial descriptions.

Testing Hypothesis Ic revealed that the PHS group was slightly less accurate than the actuarial data using the Q sort and the Mental Status Questionnaire. However, these differences did not reach statistical significance. Using the Past and Present Life Questionnaire, the TJ group having the Personal History Schedule surpassed the actuarial data (< .20 p > .10) in their descriptions. There was a significant difference between the PHS group and the two other groups of TJs in their ability to describe the target patients using the Past and Present Life Questionnaire. The Personal History Schedule group was significantly more accurate in this task (p < .05).

Hypothesis II

Hypothesis II posited that the experienced (E) TJs would be more accurate in their descriptions of the target patients than the
inexperienced (I) TJs. To test this hypothesis as it applies to each instrument of comparison, the following procedures were used.

**Q Descriptions.** Hypothesis II asserts that the E TJs Q descriptions will correlate more highly with the criterion than the I TJs Q descriptions. To test this hypothesis, the product-moment correlations with the criterion of the 15 E TJs Q-sorts for each target patient were treated as a group, transformed to $z'$ and averaged. An overall average correlation coefficient was also computed. The 15 I TJs rs were also averaged after $z'$ transformation. Table 18 gives the average $z$-transformed rs (validity coefficients) of the I and E TJs for each of the four target patients, and the overall correlation with the criterion for both groups. The significance of the difference between rs of the two TJ groups was determined by testing for the significance of the difference between the two $z'$ coefficients.
**TABLE 18**

**AVERAGE VALIDITY COEFFICIENTS OF THE E TJs AND I TJs Q SORTS FOR THE FOUR TARGET PATIENTS**

<table>
<thead>
<tr>
<th>E TJs average</th>
<th>I TJs average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient A</td>
<td>.46</td>
</tr>
<tr>
<td>Patient B</td>
<td>.48</td>
</tr>
<tr>
<td>Patient C</td>
<td>.52</td>
</tr>
<tr>
<td>Patient D</td>
<td>.28</td>
</tr>
<tr>
<td>Overall</td>
<td>.44</td>
</tr>
</tbody>
</table>

\(< .10 \text{ p } > .05 \\
p < .05 \\
p < .01 )

To test for a significance of difference between the two groups, regardless of the direction of that difference, a two-tailed test of significance was used. The Q descriptions of the E TJs did not significantly surpass those of the I TJs over all patients. Thus, the second hypothesis, as it applies to the Q-sort data, found no support. The I TJs were significantly more accurate in their Q descriptions of Patient B (\(p < .05\)) and C (\(p < .01\)). Averaging across the four target patient, the I TJs Q descriptions correlated more highly with the criterion than the E TJs Q descriptions. (\(<10 \text{ p } > .05\)).
The significance of this difference between the I and E TJs was further analysed by the type of rating materials used. Again, the correlation coefficients for the I TJs and the E TJs were transformed to $z'$, averaged and converted back to $rs$. Table 19 presents these data.

**TABLE 19**

**AVERAGE VALIDITY COEFFICIENTS OF THE E TJs AND I TJs Q SORTS FOR EACH DIAGNOSTIC CONDITION**

<table>
<thead>
<tr>
<th>Diagnostic Information</th>
<th>E TJs average $r$</th>
<th>I TJs average $r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rorschach</td>
<td>.43</td>
<td>.45</td>
</tr>
<tr>
<td>PHS</td>
<td>.39</td>
<td>.54 a</td>
</tr>
<tr>
<td>MMPI</td>
<td>.49</td>
<td>.48</td>
</tr>
</tbody>
</table>

a $p < .01$

Inexperienced TJs using the Personal History Schedule plus actuarial information were significantly superior ($p < .01$) to the E TJs using the same data in their ratings of the four target patients. This difference accounts for the main difference found between the I and E TJ groups.

**Mental Status Questionnaire.** The analysis of variance results of Hypothesis I relate to testing the second hypothesis for the Mental Status Questionnaire. (See Table 7.) The A
variable in the analysis of variance concerned itself with the variance attributable to the level of TJ experience. The F test was not significant (F = .0004) indicating that there was no appreciable difference in the accuracy of descriptions by the two groups of judges using this instrument. The interaction effect of the experience variable and the other variables (type of patient and diagnostic information used) was also not significant. Thus, the second hypothesis which posited a difference in accuracy of descriptions based on TJ level of experience was not supported for the Mental Status Questionnaire.

*Past and Present Life Questionnaire.* To test whether the E TJs were more accurate in their descriptions of the target patients than the I TJs using the Past and Present Life Questionnaire, reference is made to the analysis of variance results obtained in testing Hypothesis I. (See Table 10.) The A variable divided the TJs according to their level of clinical experience. A-1 contains the evaluations of all TJs having several years of experience beyond their Ph.D. degree, while A-2 contains the data of those TJs who were third and fourth year graduate students in clinical psychology. An F test of the variance attributable to the A variable was not significant. Moreover, none of the interaction effects involving the A variable were significant. The second
hypothesis is not substantiated by these data. The experienced TJ's ratings were not significantly superior to or different from the inexperienced TJ's using the Past and Present Life Questionnaire.

In summary, the second hypothesis posited that the experienced TJ's would be better able to describe the patients than the inexperienced TJ's. Analyses of the descriptions made by these two groups revealed that there was little difference in the accuracy of the descriptions made by the experienced and inexperienced TJ groups. Using the Q array as the descriptive instrument, the inexperienced TJ's tended to be more accurate in their description of the four target patients than the experienced TJ's. This difference is attributed to the relative superiority of the I TJ's in the Personal History Schedule diagnostic group.

**Hypothesis III**

The third hypothesis posited a difference between the intra-group and intergroup correlations of the TJ's Q descriptions. The underlying assumption here is that the diagnostic information given the TJ's would provide distinct cues which would affect their descriptions; that TJ's working with one source of information would agree more with each other than with TJ's using another source of information.
For each target patient, the 45 intercorrelations for the 10 TJs working with a specific type of data were transformed to $z'$ and averaged. The three $z'$ averages were each paired with the mean of 300 intercorrelations between the three sets of 10 judges. A $t$ test was used to determine the significance of the difference between the intragroup and intergroup means for each set of TJs.

**TABLE 20**

**MEAN INTRAGROUP AND INTERGROUP Q CORRELATIONS FOR THE TJ DESCRIPTIONS OF THE FOUR TARGET PATIENTS**

<table>
<thead>
<tr>
<th>Rorschach</th>
<th>MMPI</th>
<th>PHS</th>
<th>Intergroup</th>
<th>MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean $r$</td>
<td>mean $r$</td>
<td>mean $r$</td>
<td>mean $r$</td>
<td>Total $r$</td>
</tr>
<tr>
<td>Patient A</td>
<td>.42</td>
<td>.58</td>
<td>.48</td>
<td>.44</td>
</tr>
<tr>
<td>Patient B</td>
<td>.54</td>
<td>.57</td>
<td>.52</td>
<td>.50</td>
</tr>
<tr>
<td>Patient C</td>
<td>.47</td>
<td>.48</td>
<td>.58</td>
<td>.47</td>
</tr>
<tr>
<td>Patient D</td>
<td>.40</td>
<td>.57</td>
<td>.29</td>
<td>.31</td>
</tr>
</tbody>
</table>

Mean Total | .46  | .55  | .47  | .43  | .46  |

Table 20 presents the mean intercorrelations for each diagnostic condition and the mean intergroup correlations. In most cases, there was slightly greater agreement within a particular diagnostic condition than between, but none of the differences was significant. TJs working with a specific kind of data were in no greater agreement among themselves than they were across diagnostic conditions. There was slightly greater
intragroup agreement among the MMPI TJs. In general, however, the third hypothesis is not supported by these data. The TJs were least in agreement among themselves in their Q descriptions of Patient D (total mean intercorrelation = .38).

**Hypothesis IV**

The fourth hypothesis raises the question, "To what extent would the TJs have done just as well without any data, merely by completing the ratings according to their stereotype of the typical female adolescent inpatient?" It states that the TJs would describe the target patients more accurately using a combination of actuarial and diagnostic data than by simply employing a stereotype of an emotionally disturbed female adolescent.

**Q Descriptions.** To test this hypothesis as it applies to the Q descriptions, the TJs stereotype sorts and their patient descriptions were correlated with the criterion sorts for each of the four target patients. The product-moment correlation coefficients obtained were transformed to $z'$ and averaged for both the stereotype and patient descriptions. The mean correlations with the criterion of the stereotype and patient descriptions are presented in Table 21.
### TABLE 21

**MEAN CORRELATIONS WITH THE CRITERION OF TJs' PATIENT AND STEREOTYPE DESCRIPTIONS**

<table>
<thead>
<tr>
<th>Patient</th>
<th>TJs patient description $r$</th>
<th>TJs stereotype description $r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient A</td>
<td>.47</td>
<td>.46</td>
</tr>
<tr>
<td>Patient B</td>
<td>.51</td>
<td>.35 a</td>
</tr>
<tr>
<td>Patient C</td>
<td>.56</td>
<td>.50</td>
</tr>
<tr>
<td>Patient D</td>
<td>.30</td>
<td>.54 b</td>
</tr>
<tr>
<td>Overall</td>
<td>.46</td>
<td>.46</td>
</tr>
</tbody>
</table>

a $p < .02$

b $p < .01$

The difference between the TJs stereotype and patient $Q$ descriptions was determined by testing for the significance of the difference between two $z'$ coefficients. As a group, the TJs would have described Patient D more accurately ($p < .01$) if they had used their stereotype descriptions. All of the other patients were described more accurately than the stereotypes when the TJs used the actuarial and/or diagnostic data. Patient B was least like the TJs' stereotype and was thus described significantly better than chance using the actuarial and/or diagnostic data. There is no overall difference in the predictive accuracy of the TJs' patient descriptions and their stereotype descriptions, although the accuracy of each varied considerably with the target patient.
It is interesting to note that Patient D resembled the stereotypes of the TJs best (r = .54). The actuarial Q description was relatively less accurate (r = .29), and yet, when provided with additional diagnostic information, the TJs were unable to improve significantly on the actuarial data. The evidence suggests that the TJs were not invoking an internalized stereotype of what a female adolescent inpatient is like in completing their descriptions. Rather it appears that they were reluctant to impose their stereotypes and placed greater reliance on the actuarial and/or diagnostic data they received.

Comparisons were also made of the differences between the TJs' patient Q descriptions and their stereotype descriptions with the TJs divided into the three diagnostic groups and two levels of experience. Table 22 presents these data. There is no significant difference between the patient descriptions and stereotype descriptions for the Rorschach and MMPI TJ groups. However, in the I PHS group, there is a trend towards greater accuracy (< .10 p > .05) of the patient descriptions. However, for the E PHS group of TJs the opposite finding occurs. Their stereotype descriptions were better (< .10 p > .05) than their ratings of the patients. The I MMPI TJs had the most accurate stereotype, (r = .51) while the E Rorschach TJs had the least accurate stereotype (r = .39).
ratings of the patients. The MMPI TJs had the most accurate stereotype (r = .51) while the E Rorschach TJs had the least accurate stereotype (r = .39).

TABLE 22

MEAN CORRELATION WITH THE CRITERION OF THE E AND I TJs' PATIENT AND STEREOTYPE DESCRIPTIONS FOR EACH DIAGNOSTIC GROUP

<table>
<thead>
<tr>
<th></th>
<th>I TJs patient description</th>
<th>I TJs stereotype description</th>
<th>E TJs patient description</th>
<th>E TJs stereotype description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMPI</td>
<td>.48</td>
<td>.51</td>
<td>.49</td>
<td>.48</td>
</tr>
<tr>
<td>Rorschach</td>
<td>.45</td>
<td>.46</td>
<td>.43</td>
<td>.39</td>
</tr>
<tr>
<td>PHS</td>
<td>.54 a</td>
<td>.46</td>
<td>.39</td>
<td>.49 a</td>
</tr>
</tbody>
</table>

a < .10 p > .05

Mental Status Questionnaire. To test the fourth hypothesis as it applies to the questionnaire data, an analysis of variance was performed. For each questionnaire the weighted score totals (based on agreement with the appropriate criterion questionnaire) for both the stereotype description made by each TJ and his four target patient descriptions were computed. Complete agreement with the criterion on an individual item alternative was assigned zero weight, agreement with one CJ was assigned unit weight, and total disagreement was assigned a weight of two. The lower the
total score the more the TJ's questionnaire agreed with the criterion measure. The TJ's assessment total score was subtracted from his stereotype total score for each target patient. In each case a positive difference between the stereotype total score and the assessment total score indicated that the TJ was able to surpass his stereotype in describing the target patient. These differences were entered in a 2x3x4 factorial design for analysis. The A variable represents the two levels of experience; the B variable the type of diagnostic information the TJs had used; and the C variable the four target patients.

The analysis of variance results for the Mental Status Questionnaire are given in Table 23. The results indicate that neither the TJs level of experience nor the type of diagnostic information used was a significant source of variance. However, the target patients were a significant source of variance ($p < .05$).
TABLE 23

ANALYSIS OF VARIANCE FOR THE DIFFERENCE SCORES BETWEEN TJ PATIENT AND STEREOTYPE DESCRIPTIONS USING THE MENTAL STATUS QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience (A)</td>
<td>43.20</td>
<td>1</td>
<td>43.20</td>
<td>.792</td>
</tr>
<tr>
<td>Diagnostic Information (B)</td>
<td>56.85</td>
<td>2</td>
<td>28.42</td>
<td>.521</td>
</tr>
<tr>
<td>Target Patient (C)</td>
<td>573.20</td>
<td>3</td>
<td>191.07</td>
<td>3.501 a</td>
</tr>
<tr>
<td>AxB</td>
<td>59.85</td>
<td>2</td>
<td>29.92</td>
<td>.548</td>
</tr>
<tr>
<td>AxC</td>
<td>72.13</td>
<td>3</td>
<td>24.04</td>
<td>.440</td>
</tr>
<tr>
<td>BxC</td>
<td>177.15</td>
<td>6</td>
<td>29.52</td>
<td>.541</td>
</tr>
<tr>
<td>AxBxC</td>
<td>40.40</td>
<td>6</td>
<td>8.40</td>
<td>.154</td>
</tr>
<tr>
<td>Within</td>
<td>5239.20</td>
<td>96</td>
<td>54.58</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6272.00</td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a \ p < .05

The significance of this main effect was examined using the Newman-Keuls procedure. All the C row totals are positive, indicating that the TJs described the target patients better than their stereotypes. However, the Newman-Keuls indicates that the total for Patient A was significantly different from the totals for the other three patients. The TJs surpassed their stereotypes the most in describing this patient.
The difference between the TJs' stereotypes and their evaluations of each target patient using the Mental Status Questionnaire was assessed by testing for significance from zero of the row totals. (See Table 25.) The TJs improved upon their stereotypes in evaluating three of the four target patients. Only in the case of Patient D did they not significantly increase their accuracy using the diagnostic and/or actuarial information.

### TABLE 24
**NEWMAN-KEULS TEST FOR SIGNIFICANCE OF DIFFERENCE BETWEEN TJ PATIENT AND STEREOTYPE DESCRIPTIONS**

<table>
<thead>
<tr>
<th>C-1 (Patient A)</th>
<th>C-3</th>
<th>C-2</th>
<th>C-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>197</td>
<td>96</td>
<td>128</td>
<td>180 a</td>
</tr>
<tr>
<td>C-3 (Patient C)</td>
<td>101</td>
<td>32</td>
<td>52</td>
</tr>
<tr>
<td>C-2 (Patient B)</td>
<td>69</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>C-4 (Patient D)</td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a $p < .05$
TABLE 25

t TESTS OF SIGNIFICANCE BETWEEN THE ACCURACY OF TJ PATIENT AND STEREOTYPE DESCRIPTIONS USING THE MENTAL STATUS QUESTIONNAIRE

c row totals  t

| Patient A | 197 | 4.87  |
| Patient B | 69  | 1.70  |
| Patient C | 101 | 2.50  |
| Patient D | 17  | 42    |

a p < .05
b p < .01
c p < .001

Past and Present Life Questionnaire. The procedure outlined for analysing the Mental Status Questionnaire as it pertains to this hypothesis was also followed in the analysis of the Past and Present Life Questionnaire. The analysis of variance reported in Table 26 indicates that two variables, experience level and the target patients had a significant effect on the accuracy with which the TJs were able to evaluate the target patients as compared with the accuracy of their stereotype descriptions.
TABLE 26

ANALYSIS OF VARIANCE FOR THE DIFFERENCE SCORES BETWEEN TJ PATIENT AND STEREOTYPE DESCRIPTIONS USING THE PAST AND PRESENT LIFE QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience (A)</td>
<td>158.70</td>
<td>1</td>
<td>158.70</td>
<td>7.457 a</td>
</tr>
<tr>
<td>Diagnostic Information (B)</td>
<td>35.15</td>
<td>2</td>
<td>17.58</td>
<td>.826</td>
</tr>
<tr>
<td>Target Patient (C)</td>
<td>2429.33</td>
<td>3</td>
<td>809.78</td>
<td>38.048 b</td>
</tr>
<tr>
<td>AxB</td>
<td>116.65</td>
<td>2</td>
<td>58.32</td>
<td>2.740</td>
</tr>
<tr>
<td>AxC</td>
<td>85.70</td>
<td>3</td>
<td>28.57</td>
<td>1.342</td>
</tr>
<tr>
<td>BxC</td>
<td>265.35</td>
<td>6</td>
<td>44.22</td>
<td>2.078</td>
</tr>
<tr>
<td>AxBxC</td>
<td>778.72</td>
<td>6</td>
<td>129.79</td>
<td>6.098 a</td>
</tr>
<tr>
<td>Within</td>
<td>2043.20</td>
<td>96</td>
<td>21.28</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5912.80</td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To permit closer examination the AxC data of the analysis of variance is reproduced in Table 27. If the TJs evaluations and their stereotypes for the Past and Present Life Questionnaire
were of equal accuracy, the column and row totals should equal zero. If the TJs' evaluations of the target patients exceeded their stereotype in accuracy, the column and row totals would be positive numbers.

TABLE 27

AxC TABLE FOR THE ANALYSIS OF VARIANCE PRESENTED IN TABLE 26

<table>
<thead>
<tr>
<th></th>
<th>E TJs</th>
<th>I TJs</th>
<th>C row</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A-1</td>
<td>A-2</td>
<td>total</td>
</tr>
<tr>
<td>Patient A (C-1)</td>
<td>77</td>
<td>135</td>
<td>212 b</td>
</tr>
<tr>
<td>Patient B (C-2)</td>
<td>74</td>
<td>122</td>
<td>196 b</td>
</tr>
<tr>
<td>Patient C (C-3)</td>
<td>-10</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Patient D (C-4)</td>
<td>-54</td>
<td>-62</td>
<td>-116 c</td>
</tr>
</tbody>
</table>

A column total  

87 a  

225 b  

312

a p < .01  

b p < .001  

c p < .001

The analysis of variance also indicates that the TJs' level of experience contributed a significant source of variance. The A column totals indicates that the I TJs improved more upon their
stereotype descriptions than the E TJs in evaluating the four target patients. Both groups significantly improved upon their stereotypes for Patients A and B.

The interaction (AxBxC) was also a significant source of variance. It appears that this triple interaction resulted because the inexperienced TJ using Rorschach information were more similar (in the discrepancy between their patient and stereotype ratings) to the E TJs in rating Patients A and B, and improved the most of any group over their stereotype in rating Patient C. The interaction between type of diagnostic material and level of experience for Patient A and B are similar and different from the interaction effects produced for Patient C and D. (See Figure I.)
TRIPLE INTERACTION AMONG EXPERIENCE, TYPE OF INFORMATION AND PATIENT RATED

FIGURE 1.
In summary, the fourth hypothesis was tested for each instrument of comparison. Overall, the TJs' descriptions of the four target patients using diagnostic and actuarial data were not superior to the stereotype Q descriptions of female adolescent psychiatric inpatients they had made earlier. Although the TJs' patient descriptions using the Mental Status Questionnaire and the Past and Present Life Questionnaire exceeded the accuracy of their stereotypes across target patients, there was considerable variation among TJs in their ability to describe the target patients more accurately than their stereotypes. Patient B was consistently described with significantly greater accuracy by the TJs' evaluations than by their stereotypes, and appeared to fit the TJs' stereotypes of the typical female adolescent inpatient least. Patient D was described with significantly greater accuracy by the TJs' stereotypes using both the Q array and the Past and Present Life Questionnaire.
**Additional Analyses**

A discrepancy was noted in the validity of the actuarial Q correlations for the target patients. The Q correlation with the criterion for Patient D was only .29 as compared with .53, .56 and .56 respectively for Patients A, B, and C. An error in the criterion Q description for this patient could have produced these results. However, the reliability of the composite Q description for Patient D was .86 and there were not inordinate discrepancies among the criterion judges' individual sorts. The large error (58% total disagreement on item alternatives) but again there was no greater disagreement among the criterion judges in their ratings than for any other target patient.

In examining the individual profiles which made up each actuarial group and comparing them with the profile for the target patient, a sizable discrepancy was noted between the raw K score (22) for the target patient D and the average raw K score (13.5) for the profiles selected for this actuarial group. To determine whether the actuarial groups formed for this study, which were compiled using MMPI K-corrected scores, differed from each other in their within group similarity with and without the K correction, a $D^2$ comparison was made. As calculated here $D^2$ is the
sum of the squared T-score differences between corresponding scales on the MMPI and represents the average within-group distance between all profiles of each type. A low $D^2$ indicates that a group of profiles are geometrically similar while a high $D^2$ indicates progressively greater dissimilarity (Sines, 1963, 1966). For each patient in a particular actuarial group defined for this study, the ten clinical scales (1 through 0) and the three validity scales (L, F and K) were punched into data cards. Each MMPI profile in a particular actuarial group was then compared to every other profile in that group. This comparison was done for the T score values of each scale based on (a) Adult norms with K correction and (b) Adult norms without K correction.

**TABLE 28**

**MEAN SUM OF THE $D^2$ VALUES FOR THE MMPI PROFILES COMPRISING THE FOUR ACTUARIAL GROUPS**

<table>
<thead>
<tr>
<th>Patient</th>
<th>T score plus K</th>
<th>T score minus K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient A</td>
<td>860.6</td>
<td>972.4</td>
</tr>
<tr>
<td>Patient B</td>
<td>1822.4</td>
<td>1883.3</td>
</tr>
<tr>
<td>Patient C</td>
<td>851.1</td>
<td>850.1</td>
</tr>
<tr>
<td>Patient D</td>
<td>1474.7</td>
<td>2364.1</td>
</tr>
</tbody>
</table>

Table 28 presents the mean sum of the $D^2$ values for the profiles comprising the actuarial groups for the four target patients.
The actuarial group with the highest $D^2$ score (Patient D) using the Adult norms without K correction is also the actuarial group that had the least accurate information when compared with the criterion descriptions. Further, the increment of difference in $D^2$ moving from K corrected to non-K corrected T scores in the greatest of the four patient groups. Thus it appears that the difference in K for patient D and the associated actuarial group was an important factor in the lack of psychological similarity between the actuarial and criterion descriptions.

The TJs also had greatest difficulty describing Patient D using the Q sorts, ($r = .30$ as compared with $r = .47$, $r = .51$ and $r = .56$ respectively for Patients A, B and C). The mean intercorrelation of the TJs' Q descriptions of Patient D (.39) was also the lowest of the four patients. K is a measure of psychological defensiveness and, perhaps, the most parsimonious explanation of the poor fit of the TJ's descriptions and the actuarial data is that this defensiveness as reflected in a high K affected both the actuarial grouping (note the greatest increment in $D^2$ without K for Patient D) and the diagnostic information received by the TJs.

Individual differences among the TJs were not dealt with in the formal hypotheses. However, marked variation in the number
of times a particular TJ exceeded the actuarial descriptions in his patient descriptions existed. To examine these variations and the hit rate of individual TJs, a sign test was used. When a TJ's rating exceeded the actuarial description for a particular patient and rating instrument, a plus was assigned. When a TJ's ratings are exceeded by the actuarial description, a minus was assigned. These comparisons were made for the 30 TJs who each completed 12 rating tasks (three rating instruments for each of four patients).

Two clinicians in the I PHS group exceeded the actuarial descriptions a significant number of times. One TJ described the target patients more accurately than the actuarial data in ten of the twelve rating tasks, tied the actuarial description once, and was less accurate than the actuarial description on only one occasion. Computing the probability for this particular TJ to excell in this way using a sign test, yields a value less than .006. Another TJ approached this level of significance in surpassing the actuarial descriptions in accuracy nine out of twelve times (p < .10 > .05). The marked superiority of two members of the I PHS group also resulted in the apparent superiority of the I TJs over the E TJs. (See Hypothesis II.)

Five TJs (three E TJs and two I TJs) were more accurate in their descriptions than the actuarial descriptions only two times,
(p < .05 or less, depending on the number of ties). They were scattered among the other rating groups, two in the MMPI group and three in the Rorschach group.
CHAPTER IV

DISCUSSION

The Accuracy of the Actuarial Data

The validity coefficients for the actuarial Q descriptions leave much to be desired. The correlations of .63 and better obtained for three of the four patients represent only 28 percent association and leave an unexplained variance of 72 percent. The percentage of complete disagreement between the actuarial and criterion Mental Status Questionnaires ranged from 26% (Patient C) to a high of 52% (Patient B) with the amount of total disagreement being 35% for Patient A and 39% for Patient D. This suggests that one-fourth to one-half of the items were unreliably rated. For the Past and Present Life Questionnaire, the percentage of total disagreement was also high (3%, 33%, 50%, and 58% respectively for Patients A through D).

The relatively poor fit of the actuarial description for Patient D may be attributable to the difference in K elevation of her profile as compared with the adolescent profiles comprising the actuarial group. However, the amount of unexplained variance for all
patients indicates that the actuarial grouping itself could be improved. Grouping the data into more narrowly defined criteria for class membership might increase the probability that a test pattern implies class membership. Sines (1966) indicates that "until data are available on patients who generate profiles that are grouped into much more narrowly defined classes than those available so far, the degree of error that results from applying the class descriptor to each member of that class cannot be specified" (p. 161).

This also raises the problem of how best to define a group of patients who are psychologically similar. Gleser (1961) states that "any particular classification will be meaningful only to the extent that it is based on variables which are related to the broader class of behavior that we are trying to predict or control." MMPI classes may not be optimal for defining groups which have homogenous non-test characteristics. Certainly, they take into account only part of the variance. There is not a perfect fit between test pattern (MMPI profile configuration) and membership in a certain class. The behavior and personality attributes of persons who generate a certain test pattern are not perfectly correlated.
There is also some evidence that adolescent MMPI groups formed on the basis of K-corrected adult norms may be less homogeneous than profiles grouped on the basis of adolescent norms, without the K correction. Philip A. Marks and W. Grant Dahlstrom, making the preliminary profile groupings for the Adolescent Personality Description Project during the summer of 1967 noted that groups formed from MMPI profiles derived from age-based norms (Hathaway and Monachesi, 1963) omitting the K correction appeared more similar on extra test variables than groups that were formed on the basis of adult, K corrected normative data.

Non-psychometric data may also be useful in defining groups. Other test variables besides MMPI profile configurations also need to be explored. Possibly a combination of psychometric and non-psychometric data will provide the optimal classification schema.

For further discussion of this problem, see (Sines, 1966 and Marks and Sines, 1968.) Actuarial tables will only be as valid and predictive as the classification system used to order subjects into actuarial groups.

The Accuracy of the TJs' Descriptions

The mean accuracy of the TJs'Q descriptions varied among the four target patients (Patients A through D, r's = .47, .51, .56

a Personal communication
and .30 respectively). Again, it is apparent that correlations of this magnitude leave a considerable portion of the variance unexplained. The TJs seemed to have the least difficulty evaluating Patients B and C and the intercorrelation among their Q descriptions of these patients (.52 for Patient B and .48 for Patient C) also suggests greater agreement on the part of the TJs on these descriptions.

Comparing the relative accuracy of the data-based Q descriptions made by the TJs with the accuracy of their Q stereotype descriptions suggests that such stereotypes have predictive power capable of important clinical generalizations. In some cases, a clinician's stereotype may be the most accurate source of information about a patient! (cf. Patient D).

The TJs had much greater difficulty assessing mental status characteristics than any other aspect of comparison. Perhaps this task was the furthest removed from their typical use of diagnostic information.

Only when supplied with data concerning case history characteristics were the TJs able to improve upon the accuracy of the actuarial description using the Past and Present Life Questionnaire. In fact, the Personal History Schedule, which is self-administering and takes about one-half hour for the patient to
complete, provides as much information (for descriptive tasks undertaken in this study) as either the Rorschach or MMPI. This finding is congruent with Sines' (1949) finding that the four page biographical data sheet used in his study held up well in comparison with specifically these psychological instruments.

It has been noted that two clinicians were far superior to the actuarial description across all patients and that neither the type of rating materials used nor the level of experience of the TJs appeared to be a significant factor in the accuracy of their predictions. Numerous other studies (e.g. Cline, 1955; Holsopple and Phelan, 1954; Kostlan, 1954; Little and Schneidman, 1959; Sines, 1959) have also reported marked individual differences among the raters in the accuracy of their descriptions in personality assessment. Only one study (Cline, 1955) set out to find "good" and "bad" raters, and then subject the raters to a battery of psychological tests to find personality correlates of judging ability. Cline placed his college student sub-group of raters under this scrutiny. One of the major problems in this type of research would be finding valid measuring instruments which can assess the characteristics of psychologically sophisticated, test-wise clinicians. Another, of course, is the clinician's willingness to be studied in this manner. Kleinmuntz (1963) has developed a computer program
for the decision rules of a clinician who was most effective in judging MMPI profiles for pathology. A problem with choosing and studying good clinicians is pointed up by Cooke (1967) who demonstrated that the clinicians with the highest validity are not always also those who have the greatest reliability.

The failure of the TJs to significantly improve upon the actuarial data suggests that the tests do not provide information which will describe a particular patient with greater accuracy than the actuarial data alone. Specifically, the TJs, given additional diagnostic information, were not able to correct the actuarial description (Patient D) when it was of considerably less than optimal validity, despite the fact that Patient D matched their stereotype the best. If clinicians could change their descriptions when the actuarial data are lacking and improve upon the accuracy of the actuarial data, this would serve an important quality control function. In this study, with the exception of the rare clinician, such was not the case.

Methodological Limitations

A problem common to all studies of personality assessment is that the rating tasks the clinicians are asked to perform may not be the optimal procedure for describing the complexity, structure and organization of an individual's personality. The form
of the description differs from the one he usually follows. Further, it is not what the clinician does when asked to interpret psychological tests in that in his report he may emphasize some aspects of functioning of which he is very confident while deleting or not responding to queries about other aspects of the patient's psychological functioning.

However, the clinician cannot be too heartened by these explanations of the inaccuracy of his descriptions. Datal and Generelli (1955) asked their judges to write brief descriptions of patients on the basis of Rorschach protocols and had these judges match test reports written by different clinicians about the same patients. Here the level of agreement for personality descriptions of the same patient was generally quite low despite the fact that the interpretative task more closely approximated the procedures used by psychologists in most clinical settings.

Also, it appears that the Q array does not allow the clinician to describe the personality organization of a patient as thoroughly as most psychological reports. Sines (1966) found that only 261 differently worded statements could be extracted from a sample of 60 psychological reports written by eight different psychologists. Sines reports "this list quite probably included as separate statements a number of phrases and terms that had essentially identical
meanings because only synonymous terms or phrases were combined." He suggests that these data "do" indicate, however, that in at least the clinical setting a surprisingly limited range of behavioral potentialities and personality characteristics were attributed to patients on the basis of a psychological evaluation. It seems not unreasonable to hypothesize that the characteristics attributed by clinicians to persons in other settings may be drawn from equally restricted descriptor pools" (Sines, 1966, p. 132).

This study did not permit the TJs to make unique or open-ended predictions beyond the rating instruments. According to Meehl (1959), it is in these categories that the clinician is likely to excel since no actuarial data is available. The superiority of the clinician under these circumstances appears likely but was not tested. Certainly the inflexibility of the rating instruments does appear to be a shortcoming. However, whether it can be used as a reason to vitiate the results of this and other personality assessment studies is another matter.

Another limitation of this research is that the clinicians were not able to actually administer the tests and/or interview the patients that they rated. However, perusing the literature for studies two are of note (Marks, 1961; Sines, 1959). In both of these studies, the clinician was able to interview and test the patients
he was later to describe using a Q sort as the means of description. The validity coefficients (Q-sort correlations with patients' therapists' Qsorts) are surprisingly low. In Sines' study, the overall mean agreement between the therapists' and diagnosticians' Q descriptions was $r = .48$. Marks reported an $r$ of .39 between clinic psychologists and child therapists sorting the same patients. In this study, the overall mean $r$ for the Q descriptions of the TJs was .46 while the actuarial descriptions yielded a validity coefficient of .49. Thus, it would appear, if we can for a moment equate these studies, that the validity coefficients obtained using a combination of actuarial and diagnostic information, or actuarial information alone, were comparable to or better than those obtained by clinicians interviewing and testing the patients they rated. How much the clinician would have improved upon the actuarial description when provided direct access to the patient is a matter for further research.

**Major Implications of the Study**

The synthesis of actuarial and diagnostic information is no more accurate than the use of actuarial information alone in describing personality characteristics of adolescent patients. The actuarial data provided more consistently accurate descriptions than all but the most outstanding of the clinical synthesizers (test
judges) in this study. Considering the time-cost factor of diagnostic procedures often stressed by Meehl (1960) and others, and the current manpower shortage in the mental health field, the clinician would do well to rely upon actuarial knowledge of patients which is available to him to facilitate and expedite certain dimensions of diagnostic procedures.

The low level accuracy of the actuarial information for Patient D suggests that the K scale may be an important factor in the grouping of MMPI profiles for actuarial tables. It would appear that actuarial groupings not taking into account the discrepancy of the K scale elevation would be less accurate than those MMPI based actuarial groups formed by partialling out K or setting limits on the range of K for the profiles in a group. Research exploring this finding and, in general, to improve the accuracy of our actuarial descriptions is needed.

The need to study "expert" clinicians and to better understand their decision making processes is also pointed out. There are some clinicians who appear to be consistently able to exceed the accuracy of actuarial data. Information about the inferential process leading to these descriptions could perhaps increase the overall diagnostic accuracy of both the actuarial descriptions and individual clinicians.
The effect of direct contact with patients by the clinician on the accuracy of his descriptions of the patient when combining actuarial knowledge with his first hand diagnostic information needs to be assessed. If the clinician, under these circumstances, could improve upon the accuracy of the actuarial description, he would be able to perform an important quality control function.

The increased use of self-administered objective questionnaires providing case history information as a diagnostic tool is also suggested. This type of information appears to be able to provide as many cues to the patient's psychological functioning as our other psychological tests and does so more economically.
CHAPTER V

SUMMARY AND CONCLUSIONS

The study was designed to investigate the relative accuracy of combining personality assessment techniques as compared with using actuarially based data alone. Thirty clinical psychologists (15 experienced and 15 inexperienced) chose one of three kinds of diagnostic information (Rorschach, MMPI or PHS) which they then combined with actuarial information derived from adolescents whose MMPI profile comprised patterns (viz. 4-8-6, 6-8-9, 8-4-2, 9-4) corresponding to the profiles of four target patients. Using a Q array consisting of 138 genotypic-phenotypic items, a multiple choice questionnaire of case history information, and a multiple-choice questionnaire of mental status items, 10 psychologists compiled personality descriptions of four female adolescent inpatients for each of the three diagnostic categories. Reliability data were obtained from each clinician under each condition, as well as stereotype descriptions of the "average" patient.

Twelve experienced psychotherapists provided the criterion descriptions, which for each patient consisted of the average of three ratings compiled independently by the patient's therapist or therapist's supervisor and two other clinicians. Complete
social histories, video-tapes of initial interviews and audiotapes of the second and tenth interviews (or their equivalent) were available to these clinicians.

Testing the various hypotheses involved comparisons of the relative accuracy of the actuarial descriptions, the psychologists' patient descriptions and the psychologists' stereotype descriptions for each of the three diagnostic conditions. The effect of experience and type of diagnostic information provided on the accuracy of the psychologists' patient descriptions was also assessed.

The findings support the following conclusions:

(1) Overall, individual patients ordered into classes by their MMPI profiles can be described with equal accuracy using average descriptions characteristic of the class, or combining actuarial data with additional diagnostic information.

(2) Patients differ among themselves in the accuracy with which they can be described regardless of the data on which the descriptions are based.

(3) Additional diagnostic information does not increase the accuracy of descriptions of the patient's social history (Past and Present Life Questionnaire items) unless it contains specific factual information about case history variables (Personal History Schedule).
(4) An objective, self-administered, personal history questionnaire provides not only data pertaining to the patient's case history but it also gives as many cues about a patient's psychological functioning as the MMPI or Rorschach.

(5) There are individual differences among the clinicians in the accuracy with which they can describe patients and these differences are not associated with years of clinical experience.

(6) Clinicians using the same diagnostic information do not seem to attend to the same cues in formulating their descriptions.

(7) A description of the manner in which the patient will present herself in a first interview with her therapist (Mental Status Questionnaire items) was not readily available from the diagnostic information given the TJs. The clinicians detracted from the accuracy of the actuarial description in an attempt to improve upon it.

(8) Clinicians are unable to improve upon actuarial description of considerably less than optimal validity given additional diagnostic information even though the patients may match the clinician's stereotype description the best.
Clinicians are able to discriminate the behavioral characteristics common to female adolescent psychiatric inpatients. Their stereotype descriptions matched one patient better than their ratings and matched all patients better than chance.

Clinicians using patient Rorschach protocols as an additional source of diagnostic information tended to describe patients with less accuracy than the actuarial description, and than clinicians using the Personal History Schedule or the MMPI as an additional source of diagnostic information.

The test-retest reliability of the clinicians' ratings was relatively high. The mean correlation between two Q sorts of the same patient for the clinicians was $r = .74$. The clinicians agreed on 64 percent of their ratings on the Mental Status Questionnaire and on 71 percent of their ratings on the Past and Present Life Questionnaire.

Averaging three psychotherapists descriptions results in a more stable, reliable criterion measure which is less subject to individual biases.

The conclusion of no overall difference between the accuracy of the actuarial method of description as compared with the clinicians' syntheses of actuarial information with additional diagnostic information may be generalized over the population of clinicians, diagnostic information input, and items of behavioral description.
studied. Caution should be exercised in generalizing to other populations of predictive-descriptive settings and types of patients. The accumulation of evidence from other related studies will facilitate generalization to these areas.

(14) Implications of the results of this study are seen as the continuing necessity of the individual clinician, using either or both methods, to check on the validity of his personality assessments. The task of identifying those particular situations "covered" by the actuarial descriptions and those in which the clinician does excell as well as the refinement of actuarial tables to produce better descriptors is a challenge for the future.
APPENDIX A

List of Participants
CRITERION JUDGES

Anita Albaum
Rahe Corlis
Malcolm Gardner
Charles Hall
John Kangas
Joseph Panepinto
Carol Anne Risvi
Henry Samuels
Saul Siegel
Byron Stinson
Richard Van Sickle
Charles Wenar
<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>James Armentrout</td>
<td>Alan Lowenthal</td>
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<td>Allan Barclay</td>
<td>Helen McLaughlin</td>
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<td>Demoyne Bekker</td>
<td>Ray McNamara</td>
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<td>Peter Briggs</td>
<td>William Pierce</td>
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<td>James Carpenter</td>
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<td>Frank Clark</td>
<td>Wentworth Quast</td>
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<td>Jeffrey Dolgan</td>
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<td>Franz Epting</td>
<td>David Rouzer</td>
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<td>Susan Erbaugh</td>
<td>Britton Ruebush</td>
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<td>James Gilbertson</td>
<td>Richard Sanders</td>
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<td>Martin Cluck</td>
<td>Lloyd Sines</td>
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<td>Seymour Gross</td>
<td>Edison Trickett</td>
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<td>A. Jack Hafner</td>
<td>Eileen Valcov</td>
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<td>Michael Hahn</td>
<td>Gerald Weinberger</td>
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<td>Patricia James</td>
<td>Robert Wirt</td>
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APPENDIX B

Personal History Schedule
PERSONAL HISTORY SCHEDULE
(Self-Administered Form Revised)

Name (please print)_________________________ Age_____ Sex____ Date____

Last       First

DIRECTIONS: This schedule consists of a number of questions about your life, both past and present. Read each question and decide which of the several answers is true or mostly true as applied to you personally. You are to mark your answers directly on the schedule by making a check between the parentheses ( ) opposite the answer you choose. You will note that there are some questions which ask for more than one answer. You are to mark these by checking as many answers as may apply. Unless you are otherwise instructed, however, select only one answer for each question. Only spend enough time on each question to come to the best answer, and move on to the next question. Please answer every question as exactly and truly as you can.

PART I: CHILDHOOD

The following questions apply to your life BEFORE AGE 12

1. With what adults did you live throughout most of your childhood?
   ( ) both natural parents
   ( ) mother only
   ( ) father only
   ( ) mother and step-father
   ( ) father and step-mother
   ( ) foster or adoptive parents

2. Which of the following characterized your father (the parent checked in question "1" above) during your childhood?
   Check as many as apply
   ( ) encouraging
   ( ) discouraging
   ( ) bossy

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3. Which of the following characterized your mother (the parent checked in question "1" above) during your childhood? Check as many as apply
   ( ) inconsistent
   ( ) consistent
   ( ) relaxed
   ( ) tense
   ( ) passive
   ( ) active
   ( ) close
   ( ) distant
   ( ) cold
   ( ) warm
   ( ) sympathetic
   ( ) critical
   ( ) punishing
   ( ) rewarding
   ( ) lenient
   ( ) bossy
   ( ) discouraging
   ( ) encouraging

4. How affectionate was your father during your childhood?
   ( ) very affectionate
   ( ) warm
   ( ) cool
   ( ) unfeeling

5. How affectionate was your mother during your childhood?
   ( ) very affectionate
   ( ) warm
   ( ) cool
   ( ) unfeeling

6. How successful was your father as a father during your childhood?
   ( ) very successful
   ( ) fairly successful
   ( ) about average
   ( ) fairly unsuccessful
   ( ) very unsuccessful

7. How successful was your mother as a mother during your childhood?
   ( ) very successful
   ( ) fairly successful
   ( ) about average
   ( ) fairly unsuccessful
   ( ) very unsuccessful

8. How did you feel while in the company of your father as a child? Check as many as apply
   ( ) close
   ( ) distant
   ( ) warm
   ( ) cold
   ( ) secure
   ( ) insecure
   ( ) assertive
   ( ) submissive
   ( ) guilty
   ( ) proud
   ( ) calm
   ( ) tense
   ( ) ashamed
   ( ) fearful

9. How did you feel while in the company of your mother as a child? Check as many as apply
   ( ) fearful
   ( ) ashamed
10. How often as a child did you know what moral judgments your father would pass on your behavior? 
( ) almost always 
( ) usually 
( ) sometimes 
( ) rarely 
( ) never

11. How often as a child did you know what moral judgments your mother would pass on your behavior? 
( ) almost always 
( ) usually 
( ) sometimes 
( ) rarely 
( ) never

12. How often as a child could you tell in advance the kind of emotional reaction your father would have to various situations? 
( ) almost always 
( ) usually 
( ) sometimes 
( ) rarely 
( ) never

13. How often as a child could you tell in advance the kind of emotional reaction your mother would have to various situations? 
( ) almost always 
( ) usually 
( ) sometimes 
( ) rarely 
( ) never

14. How often as a child could you tell in advance what disciplinary action your father would take? 
( ) almost always 
( ) usually 
( ) sometimes 
( ) rarely 
( ) never

15. How often as a child could you tell in advance what disciplinary action your mother would take? 
( ) almost always 
( ) usually 
( ) sometimes 
( ) rarely 
( ) never

16. How strict was your father's discipline during your childhood? 
( ) very strict 
( ) strict 
( ) about average 
( ) lenient 
( ) very lenient

17. How strict was your mother's discipline during your childhood? 
( ) very strict 
( ) strict 
( ) about average 
( ) lenient 
( ) very lenient
18. How strong was your father's temper during your childhood?
( ) very strong
( ) strong
( ) about average
( ) mild
( ) very mild

19. How strong was your mother's temper during your childhood?
( ) very strong
( ) strong
( ) about average
( ) mild
( ) very mild

20. To whom in your immediate family were you closest as a child?
( ) father
( ) mother
( ) older brother
( ) older sister
( ) younger brother
( ) younger sister
( ) grandparent
( ) no one

21. To whom in your immediate family were you least close as a child?
( ) father
( ) mother
( ) older brother
( ) older sister
( ) younger brother
( ) younger sister
( ) grandparent
( ) no one

22. To whom in your family did you talk about your personal problems as a child?
Check one or more
( ) father
( ) mother
( ) older brother
( ) older sister
( ) younger brother
( ) younger sister
( ) grandparent
( ) no one

23. How often did your parents quarrel during your childhood?
( ) daily
( ) about weekly
( ) occasionally - though not as often as once a week
( ) rarely
( ) never

24. Who took the responsibility for deciding things in your family during your childhood?
( ) father took responsibility for making all major decisions
( ) father decided the most important things but mother took responsibilities for her own affairs
( ) mother made most of important decisions but father decided about his own affairs
( ) mother took responsibility for making all major decisions
( ) neither parent was especially responsible for making decisions
( ) both parents were equally responsible for making decisions

25. Who of the following were among your closest friends during childhood? Check one or more
( ) boys your own age
( ) girls your own age
( ) older boys
( ) older girls
( ) younger boys
( ) younger girls
( ) adult males
( ) adult females
( ) no one

26. Which of the following were problems for you during childhood? Check as many as apply
( ) allergies (food, asthma, etc.
( ) bed wetting
( ) nail biting
( ) thumb sucking
( ) eating (feeding)
( ) toilet training
( ) poor eyesight
( ) overweight
( ) underweight
( ) poor hearing
( ) being too tall
( ) being too short
( ) being teased
( ) being called a "sissy"
( ) being called a "rough neck"
( ) not being taken seriously
( ) making friends
( ) keeping friends
( ) nervousness
( ) nightmares
( ) sleep walking
( ) sleep talking
( ) specific fears (dark, height, etc.)
( ) difficulty reading
( ) difficulty speaking
( ) subjects in school
( ) cheating
( ) lying
( ) stealing
( ) disobedience
( ) being a "difficult" child
( ) trouble with the law

PART II: ADOLESCENCE

The following questions apply to your life now, SINCE AGE 12

27. With what adults do you live now?
( ) both natural parents
( ) mother only
( ) father only
( ) mother and step-father
( ) father and step-mother
( ) foster or adoptive parents
( ) grandparents

28. Which of the following characterize your father (the parent with whom you live) now? Check as many as apply
( ) warm
( ) cold
( ) distant
( ) close
29. Which of the following characterize your mother (the parent with whom you live) now?
Check as many as apply
( ) sympathetic
( ) critical
( ) punishing
( ) rewarding
( ) lenient
( ) bossy
( ) discouraging
( ) encouraging
( ) strong
( ) weak
( ) inconsistent
( ) consistent
( ) relaxed
( ) tense
( ) passive
( ) active
( ) close
( ) distant
( ) cold
( ) warm
( ) no mother in home now

30. How affectionate is your father now?
( ) very affectionate
( ) warm
( ) cool
( ) unfeeling
( ) no father in home now

31. How affectionate is your mother now?
( ) very affectionate
( ) warm
( ) cool
( ) unfeeling
( ) no mother in home now

32. How do you feel while in the company of your father now?
Check as many as apply
( ) close
( ) distant
( ) warm
( ) cold
( ) secure
( ) insecure
( ) assertive
( ) submissive
( ) guilty
( ) proud
( ) calm
( ) tense
( ) ashamed
( ) fearful
( ) no father in home now

33. How do you feel while in the company of your mother now?
Check as many as apply
( ) fearful
( ) ashamed
( ) tense
( ) calm
( ) proud
( ) guilty
34. How often now do you know what moral judgments your father will pass on your behavior?
( ) almost always
( ) usually
( ) sometimes
( ) rarely
( ) never
( ) no father in home now

35. How often now do you know what moral judgments your mother will pass on your behavior?
( ) almost always
( ) usually
( ) sometimes
( ) rarely
( ) never
( ) no mother in home now

36. How often now can you tell in advance the kind of emotional reaction your father will have to various situations?
( ) almost always
( ) usually
( ) sometimes
( ) rarely
( ) never
( ) no father in home now

37. How often now can you tell in advance the kind of reaction your mother will have to various situations?
( ) almost always
( ) usually
( ) sometimes
( ) rarely
( ) never
( ) no mother in home now

38. How strict is your father's discipline now?
( ) very strict
( ) strict
( ) about average
( ) lenient
( ) very lenient
( ) no father in home now

39. How strict is your mother's discipline now?
( ) very strict
( ) strict
( ) about average
( ) lenient
( ) very lenient
( ) no mother in home now

40. How often now can you tell in advance what disciplinary action your father will take?
( ) almost always
( ) usually
( ) sometimes
( ) rarely
( ) never
( ) no father in home now

41. How often now can you tell in advance what disciplinary action your mother will take?
( ) almost always
( ) usually
( ) sometimes
( ) rarely
( ) never
( ) no mother in home now
42. How would you describe your father's temper now?
   ( ) very mild
   ( ) mild
   ( ) about average
   ( ) strong
   ( ) very strong
   ( ) no father in home now

43. How would you describe your mother's temper now?
   ( ) very mild
   ( ) mild
   ( ) about average
   ( ) strong
   ( ) very strong
   ( ) no mother in home now

44. How often do your parents quarrel now?
   ( ) daily
   ( ) about weekly
   ( ) occasionally though not as often as once a week
   ( ) rarely
   ( ) never

45. To whom in the family are you closest now?
   ( ) father
   ( ) mother
   ( ) older brother
   ( ) older sister
   ( ) younger brother
   ( ) younger sister
   ( ) grandparent
   ( ) no one

46. To whom in the family are you the least close now?
   ( ) father
   ( ) mother
   ( ) older brother
   ( ) older sister
   ( ) younger brother
   ( ) younger sister

47. To whom in the family do you talk about your personal problems now?
   Check one or more
   ( ) father
   ( ) mother
   ( ) older brother
   ( ) older sister
   ( ) younger brother
   ( ) younger sister
   ( ) grandparent
   ( ) no one

48. In what grade are you at school?
   ( ) 6th
   ( ) 7th
   ( ) 8th
   ( ) 9th
   ( ) 10th
   ( ) 11th
   ( ) 12th
   ( ) not in school

49. In terms of teaching ability, how would you describe most of your teachers in school?
   ( ) superior
   ( ) above average
   ( ) average
   ( ) below average
   ( ) inferior
   ( ) not in school

50. How interesting and challenging are most of the subjects you are now taking in school?
   ( ) very interesting and challenging
   ( ) above average
   ( ) about average
   ( ) below average
   ( ) dull and routine
   ( ) not in school
51. If you have failed any subjects in school, which of the following do you consider to be the major reasons?
Check one or more
( ) laziness
( ) lack of ability
( ) lack of interest
( ) dislike of subject
( ) disliked by teacher
( ) poor teacher
( ) hard to study at home
( ) sickness
( ) belonging to too many clubs
( ) participating in sports
( ) going to too many parties or shows
( ) too many dates
( ) working part-time
( ) have not failed

52. In terms of intellectual ability, how would you describe most students in your class at school?
( ) too bright - it is difficult to keep up with them
( ) just bright enough
( ) not bright enough - they do not provide enough stimulation
( ) not in school

53. Who of the following are among your closest associates at school?
( ) boys your own age
( ) girls your own age
( ) older boys
( ) older girls
( ) younger boys
( ) younger girls
( ) teachers
( ) no one

54. Who of the following are among your closest associates away from school?
( ) boys your own age
( ) girls your own age
( ) older boys
( ) older girls
( ) younger boys
( ) younger girls
( ) adults
( ) adults
( ) no one

55. What do you like to do with your leisure time?
Check as many as apply
( ) indoor hobbies
( ) outdoor hobbies
( ) participate in sports
( ) watch sports
( ) listen to records
( ) go to movies
( ) watch television
( ) read
( ) attend parties and dances
( ) school activities
( ) church activities
( ) work on car
( ) ride around in car
( ) sew
( ) go shopping
( ) talk on phone
( ) hang around drive-in
( ) hang around downtown

56. Which one of the following do you plan to do immediately after high school?
( ) enter the military service
( ) get a job
( ) get married
( ) go to a technical, trade, or business school
( ) go to a junior college
( ) go first to a junior college and then to a four-year college  
( ) go directly to a four-year college  
( ) undecided

57. From whom did you first learn about sexual intercourse?  
( ) mother  
( ) father  
( ) adults other than parents  
( ) brothers  
( ) sisters  
( ) other boys  
( ) other girls

58. Which of the following was the main source of your sex information?  
( ) conversation  
( ) observation  
( ) printed matter  
( ) actual experience

59. How old were you when you started smoking?  
( ) less than 10  
( ) 10  
( ) 11  
( ) 12  
( ) 13  
( ) 14  
( ) 15  
( ) 16  
( ) 17  
( ) 18  
( ) have never started

60. How much do you smoke now?  
( ) a pack or more a day  
( ) three to five packs a week  
( ) a pack or two a week  
( ) about a pack a week  
( ) a couple of packs a month  
( ) less than a pack a month  
( ) do not smoke

61. How often do you drink alcohol now?  
( ) daily  
( ) three to four times a week  
( ) once or twice a week  
( ) about once or twice a month  
( ) a couple of times a year  
( ) not at all

62. How old were you when you had your first date on your own?  
( ) less than 10  
( ) 10  
( ) 11  
( ) 12  
( ) 13  
( ) 14  
( ) 15  
( ) 16  
( ) 17  
( ) 18  
( ) have never dated on own

63. How often do you date now?  
( ) several times a week  
( ) about twice a week  
( ) once a week  
( ) about once or twice a month  
( ) several times a year  
( ) once or twice a year  
( ) not at all
64. Which of the following traits do you most desire in a member of the opposite sex?

Check as many as apply

( ) intelligence
( ) hard-working
( ) liked by parents
( ) admired by others
( ) self-confidence
( ) cleanliness
( ) cheerfulness
( ) thoughtfulness
( ) dependability
( ) honesty
( ) maturity
( ) good conversationalist
( ) good health
( ) good looks
( ) sexy
( ) sexually pure

65. To what degree has religion been an influence in your upbringing?

( ) extremely important
( ) moderately important
( ) of some importance
( ) of little importance
( ) of no importance at all

66. Which of the following come closest to being your goals in life?

Check one or more

( ) making money and having fun
( ) acquiring knowledge
( ) being happy and respected for my work
( ) being prominent and a respected member of community
( ) reaching the top of some field of work and becoming famous
( ) living a simple but secure life
( ) serving society and my fellow man

67. Which of the following do you consider your greatest obstacle to overcome in order to reach your goal in life?

( ) lack of ability
( ) lack of training and education
( ) poor health
( ) lack of money
( ) lack of "pull" with the right people
( ) laziness
( ) unwillingness to make sacrifices

68. Which of the following problems are troubling you now?

Check as many as apply

( ) being an only child
( ) having no regular allowance
( ) not allowed to use the family car
( ) no chance to do what I want to do
( ) taking things too seriously
( ) being afraid of making mistakes
( ) too short
( ) too tall
( ) overweight
( ) underweight
( ) not good looking
( ) being teased
( ) getting into trouble
( ) lacking self-control
( ) being picked on
( ) people finding fault with me
( ) not being taken seriously
( ) having bad dreams
( ) feeling nobody understands me
( ) feeling nobody likes me
( ) being careless
( ) smoking
( ) getting in fights
( ) losing my temper
( ) feeling ashamed of something
( ) afraid of the future
( ) getting low grades in school
( ) being a grade behind in school
( ) afraid of failing in school
( ) afraid to speak up in class
( ) slow in making friends
( ) wishing people liked me better
( ) picking the wrong kind of friends
( ) no place to entertain friends
( ) awkward in meeting people
( ) going out with the opposite sex
( ) not knowing how to make a date
( ) now allowed to have dates

( ) concerned over proper sex behavior
( ) parents not understanding me
( ) being criticized by my parents
( ) Parents not liking my friends
( ) family quarrels

69. Which of the following do you experience when you feel sad or depressed?

Check as many as apply
( ) tiredness
( ) restlessness
( ) dizziness
( ) shakiness
( ) vomiting
( ) emptiness feeling inside
( ) sweating
( ) crying
( ) constipation
( ) diarrhea (loose bowels)
( ) dry mouth
( ) pounding heart
( ) shortness of breath
( ) "butterflies" in stomach
( ) headache
( ) boredom
( ) loss of appetite
( ) loss of interest
( ) difficulty concentrating
( ) difficulty getting up in the morning
( ) difficulty going to sleep at night

70. Which of the following do you experience when you feel tense or anxious?

Check as many as apply
( ) difficulty getting up in the morning
( ) restlessness
( ) headache
<table>
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<tr>
<th>Symptome</th>
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<tbody>
<tr>
<td>sweating</td>
<td>crying</td>
</tr>
<tr>
<td>tiredness</td>
<td>constipation</td>
</tr>
<tr>
<td>difficulty going to sleep at night</td>
<td>diarrhea (loose bowels)</td>
</tr>
<tr>
<td>dizziness</td>
<td>dry mouth</td>
</tr>
<tr>
<td>difficulty concentrating</td>
<td>pounding heart</td>
</tr>
<tr>
<td>shakiness</td>
<td>shortness of breath</td>
</tr>
<tr>
<td>boredom</td>
<td>&quot;butterflies&quot; in stomach</td>
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<tr>
<td>vomiting</td>
<td>headache</td>
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<tr>
<td>shortness of breath</td>
<td>boredom</td>
</tr>
<tr>
<td>crying</td>
<td>loss of appetite</td>
</tr>
<tr>
<td>&quot;butterflies&quot; in stomach</td>
<td>difficulty concentrating</td>
</tr>
<tr>
<td>loss of interest</td>
<td>never feel guilty</td>
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<td></td>
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<tr>
<td>constipation</td>
<td>headache</td>
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<td>pounding heart</td>
<td>boredom</td>
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<tr>
<td>loss of appetite</td>
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</tr>
<tr>
<td>diarrhea (loose bowels)</td>
<td>dry mouth</td>
</tr>
<tr>
<td>dry mouth</td>
<td>difficulty concentrating</td>
</tr>
</tbody>
</table>

71. Which of the following do you experience when you feel guilty? Check as many as apply

- fear
- emptiness feeling inside
- anger
- difficulty getting up in the morning
- a wish you were dead
- difficulty going to sleep at night
- loss of interest
- tiredness
- restlessness
- dizziness
- blushing
- shakiness
- vomiting
- sweating

72. In which of the following ways do you express yourself when you are angry? Check as many as apply

- become silent
- go off by self
- brood
- become tearful
- cry
- speak out
- shout
- swear
- hit something
- throw something
- hit someone
- fight physically
- argue verbally
- plunge into activity
- try to forget it
- never get angry

PART III: SELF DESCRIPTION

Appearing below is a list of adjectives. You are to read them quickly and put a check opposite each one you consider descriptive of yourself as you are now. Do not worry about duplications,
contradictions, and so forth.
Work quickly and do not
spend too much time on any
one. Try to be frank and
check all adjectives which
describe you as you really
are, not as you would like
to be.

Check as many as apply

( ) absent-minded
( ) active
( ) adaptable
( ) adventurous
( ) affected
( ) affectionate
( ) aggressive
( ) alert
( ) aloof
( ) ambitious
( ) anxious
( ) apathetic
( ) appreciative
( ) argumentative
( ) arrogant
( ) artistic
( ) assertive
( ) attractive
( ) autocratic
( ) awkward
( ) bitter
( ) blustery
( ) boastful
( ) bossy
( ) calm
( ) capable
( ) careless
( ) cautious
( ) changeable
( ) charming
( ) cheerful
( ) civilized
( ) clear-thinking
( ) clever

( ) coarse
( ) clever
( ) commonplace
( ) complaining
( ) complicated
( ) conceited
( ) confident
( ) confused
( ) conscientious
( ) conservative
( ) considerate
( ) contented
( ) conventional
( ) cool
( ) cooperative
( ) courageous
( ) cowardly
( ) cruel
( ) curious
( ) cynical
( ) daring
( ) deceitful
( ) defensive
( ) deliberate
( ) demanding
( ) dependable
( ) dependent
( ) despondent
( ) determined
( ) dignified
( ) discreet
( ) disorderly
( ) dissatisfied
( ) distractible
( ) distrustful
( ) dominant
( ) dreamy
( ) dull
( ) easy going
( ) effeminate
( ) efficient
( ) egotistical
( ) emotional
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submissive
suggestible
sulky
superstitious
suspicious
sympathetic
tactful
tactless
talkative
temperamental	
tense
thankless
thorough
thoughtful
thrifty	
timid	
tolerant
touchy
tough
trusting
unaffected
unambitious
unassuming
unconventional
undependable
understanding
unemotional
unexcitable
unfriendly
uninhibited
unintelligent
unkind
unrealistic
unscrupulous
unselfish
unstable
vindictive
versatile
warm
wary
weak
whiny
wholesome
wise
withdrawn
witty
worrying
zany
APPENDIX C

Rating Instruments
LIST OF Q ITEMS

Adolescent Personality
Description Project

1. Is vulnerable to real or fancied threat; generally fearful, is a worrier.
2. Demands sympathy from others.
3. Values wealth or material possessions and judges others in terms of them.
4. Has a need to think of self as an unusually self-sufficient person.
5. Possesses a basic insecurity and need for attention.
6. Places value on intellectual and cognitive activities, skills and attitudes.
7. Psychic conflicts are represented in somatic symptoms.
8. Overacts to danger or makes emergency responses in the absence of danger.
9. Presents self as being physically, organically sick.
10. Fears or phobias present.
11. Is cheerful.
12. Tends not to become involved in things; is passively resistant.
13. Is easy to talk to and get along with in this kind of relationship.
14. Utilizes acting-out as a defense mechanism.
15. Tends to arouse liking and acceptance in people.
16. Is overanxious about minor matters and reacts to them as if they were emergencies.
17. Utilizes projection as a defense mechanism.
19. Is unpredictable and changeable in behavior and attitudes.
20. Complains of difficulty in going to sleep.
21. Has multiple neurotic manifestations.
22. Resents authority figures and typically has impulses to resist or derogate them.
23. Judges self and others in conventional terms like "popularity", "social pressures", etc.
24. Spends a good deal of time in personal fantasy and daydreams.
25. Presents a favorable prognosis.
26. Reacts to frustration intropunitively (i.e., punishes self).
27. Has shown ability to talk about conflicts in most areas.
28. Is evasive.
29. Tends to avoid or delay action; fears committing self to any definite course.
30. Has "diagnostic" insight; awareness of the descriptive features of own behavior.
31. Has a high aspiration level for self; is ambitious; wants to get ahead.
32. Is tense, high-strung and jumpy.
33. Is a reliable informant.
34. Undercontrols own impulses; acts with insufficient thinking and deliberation.
35. Has a need to achieve; to strive to do something as well as possible.
36. Has a rapid personal tempo; thinks, talks, moves at a fast rate.
37. Defenses are fairly adequate in relieving psychological distress.
38. Is suggestible; overly responsive to other people's evaluations rather than own.
39. Genotype has psychopathic features.
40. Genotype has schizoid features.
41. Has good verbal-cognitive insight into own personality structure and dynamics.
42. Is "normal", healthy, symptom free.
43. Undervalues and consistently derogates the opposite sex.
44. Is distrustful of people in general; questions their motivations.
45. Thinks and associates in unusual ways; has unconventional thought processes.
46. Is nervous, tense in manner, trembles, sweats, or shows other signs of anxiety.
47. Handles anxieties and conflicts by refusing to recognize their presence.
48. Fears loss of control; cannot "let go" even when appropriate.
49. Appears to be poised, self-assured, socially at ease.
50. Has a need to affiliate with others.
51. Exhibits good heterosexual adjustment.
52. Is self-dramatizing; histrionic.
53. Is open and frank in discussing problems.
54. Is defensive about admitting psychological conflicts.
55. Has feelings of hopelessness.
56. Complains of weakness or easy fatiguability.
57. Seems unable to express own emotions in any modulated adaptive way.
58. Tends to be ruminative and over-ideational.
59. Is socially extraverted (outgoing).
60. Has inner conflicts about self-assertion.
61. Tends to be flippant both in word and gesture.
62. Exhibits evidence of narcissism (latent or manifest).
63. Has a resilient ego-defense system; has a safe margin of integration.
64. Expresses impulses by verbal acting-out.
65. Has an exaggerated need for affection.
66. Is a serious person who tends to anticipate problems and difficulties.
67. Is able to sense other person's feelings; is an intuitive empathic person.
68. Keeps people at a distance; avoids close interpersonal relationships.
69. Gets along well in the world as it is; is socially appropriate in own behavior.
70. Utilizes rationalization as a defense mechanism.
71. Genotype has obsessive-compulsive features.
72. Is demanding; tends to take the attitude "the world owes me a living".
73. Is excitable.
74. Utilizes regression as a defense mechanism.
75. Has inner conflict about emotional dependency.
76. Avoids situations where own performance will be inferior to that of others.
77. Is tearful and/or cries openly.
78. Is irritable.
79. Is resentful.
80. Emphasizes oral pleasures; is self-indulgent.
81. Is perfectionistic; is compulsively meticulous.
82. Gets appreciable "secondary gain" from symptoms.
83. Is argumentative.
84. Is critical; not easily impressed; skeptical.
85. Has inner conflicts about sexuality.
86. Is shy, anxious and inhibited.
87. Is afraid of emotional involvement with others.
88. Is readily dominated by others; is submissive.
89. Is provocative.
90. Is apathetic.
91. Tends toward over-control of needs and impulses.
93. Exhibits depression (manifest sad mood).
94. Exhibits manneristic behavior.
95. Accepts others as they are; is not judgmental.
96. Genotype has paranoid features.
97. Is sensitive to anything that can be construed as a demand.
98. Is egocentric; self-centered; selfish.
99. Is stereotyped and unoriginal in approach to problems.
100. Obsessive thinking is present.
101. Utilizes intellectualization as a defense mechanism.
102. Genotype has hysteroid features.
103. Reports difficulty in thinking; can't concentrate.
104. Delusional thinking is present.
105. Manifests hypochondriacal tendencies.
106. Has grandiose ideas (extreme is delusions of grandeur).
107. Would be organized and adaptive when under stress or trauma.
108. Has the capacity for forming close interpersonal relationships.
Name ________________________________

Case Number __________________________

Past and Present Life Questionnaire

Note: The numbers to the left of the alternative indicate percentage of endorsement.

1. The development of primary symptoms
   ( ) less than a week
   ( ) a week to a month
   ( ) a month to a year
   ( ) over a year

2. Age of onset of primary symptoms(s)
   ( ) birth to a year
   ( ) 1-5 years
   ( ) 6-7 years
   ( ) 8-9 years
   ( ) 10-11 years
   ( ) 12-13 years
   ( ) 14-15 years
   ( ) 16-17 years

3. Somatic system involvement
   ( ) none
   ( ) cardiorespiratory
   ( ) gastrointestinal
   ( ) genitourinary
   ( ) musculoskeletal
   ( ) nervous system

4. The home was first disrupted when the patient's
   ( ) parents separated
   ( ) parents were divorced
   ( ) mother died
   ( ) father died

5. The father's interest in the activities of patient during patient's childhood
   ( ) was interested in most things the patient did (in school, at play, etc.)
   ( ) showed interest only in a few things the patient did
   ( ) was interested in little if anything the patient did

6. The quality of the father's relation with patient now can best be characterized as
   ( ) affectionate
   ( ) ambivalent
   ( ) dependent
   ( ) dominating
   ( ) indifferent
   ( ) neglecting
   ( ) overprotecting
   ( ) rejecting
7. The mother's interest in the activities of the patient during the patient's childhood
   ( ) was interested in most things patient did (in school, at play, etc.)
   ( ) showed interest in only a few things patient did
   ( ) was interested in little if anything patient did

8. The quality of the mother's relation with the patient now can be best characterized as
   ( ) affectionate
   ( ) ambivalent
   ( ) dependent
   ( ) dominating
   ( ) indifferent
   ( ) neglecting
   ( ) overprotecting
   ( ) rejecting

9. Patient's ordinal position among sibs at birth
   ( ) first
   ( ) middle
   ( ) last
   ( ) only child

10. During his or her childhood (6-11 years) the patient
    ( ) was disciplined primarily by his or her father
    ( ) was disciplined primarily by his or her mother

11. During his or her childhood (6-11 years) the patient
    ( ) had violent quarrels with his or her sib(s) and a very poor relationship
    ( ) had ill feelings toward sib(s) and a generally poor relationship
    ( ) felt rather indifferent toward sib(s) and had an easy-going relationship
    ( ) was fond of sib(s) and had a good relationship
    ( ) had no sibs

12. During his or her childhood (6-11 years) the patient
    ( ) had no known trouble with the law
    ( ) had trouble but denies it
    ( ) admits to some trouble with the law
    ( ) considers self to be (or to have been) delinquent

13. During adolescence (12-18 years) grades in school
    ( ) mainly A's
    ( ) A's and B's
    ( ) mainly B's
    ( ) B's and C's
    ( ) mainly C's
    ( ) C's and D's
    ( ) D's and F's
14. Non-academic performance in school
( ) seems to succeed at whatever he or she does
( ) most things come easily though there are some that are difficult
( ) most things are difficult with an occasional complete failure

15. Attitudes toward teachers
( ) holds a generally unfavorable attitude toward teachers
( ) holds a favorable attitude toward some teachers and an unfavorable attitude toward others
( ) neutral
( ) mentions teachers with favor

16. Behavior in school
( ) is very well behaved
( ) gets into trouble about as often as others do
( ) is frequently in trouble
( ) is in trouble most of the time and has been suspended or expelled at least once

17. Relations with other students in school
( ) gets along very well with others
( ) has a few problems in getting along but is usually able to settle them
( ) is often in serious trouble with others
( ) has had to change schools because of trouble with others

18. Type of friendships outside of school
( ) has many friends and a few close friends
( ) has a few close friends only
( ) has many friends but no very close friends
( ) has few friends of any kind

19. Age of friends
( ) often older than patient
( ) usually about the patient's age
( ) often younger than the patient

20. Frequency of dating
( ) once to twice a year
( ) about once a month
( ) about once a week
( ) more than once a week
( ) does not date yet

21. Attitude of parents toward dating
( ) indifferent toward dating
( ) strongly disapprove of dating
( ) generally approve of dating
( ) encourage the patient to date more often
22. Attitude toward religion
   ( ) rebels against religion
   ( ) feels it is unimportant
   ( ) conventional conformity
       without strong interest
   ( ) moderate interest
   ( ) strong interest

23. Trouble with the law on
    the part of the patient
   ( ) none known
   ( ) one or two minor
       offenses such as
       traffic
   ( ) a number of minor
       offenses
   ( ) some serious offense
       for which placed on
       probation
   ( ) some serious offense
       for which placed in
       detention
   ( ) both probation and
       detention

24. Way of acknowledging
    trouble with law
   ( ) no trouble
   ( ) blames others
   ( ) blames self
   ( ) denies that he or she
       has had real trouble
   ( ) believes that offended
       part had it coming
   ( ) believes that he or
       she did only what
       others did
Mental Status Questionnaire

Patient's psychological status at the time of your initial evaluation.

Note: The numbers to the left of the alternative indicate percentage of endorsement.

1. Manifest Anxiety
   ( ) none
   ( ) mild
   ( ) moderate
   ( ) severe
   ( ) very severe

2. Psychomotor activity
   ( ) grossly retarded
   ( ) slow
   ( ) normal
   ( ) accelerated
   ( ) hyperactive

3. Rapport
   ( ) close
   ( ) friendly
   ( ) superficial
   ( ) distant

4. Rate of speech
   ( ) no speech
   ( ) slow
   ( ) normal
   ( ) rapid

5. Amount of verbal expression
   ( ) mute or none
   ( ) impoverished
   ( ) normal
   ( ) talkative
   ( ) circumstantial

6. Quality of ideation
   ( ) creative
   ( ) conventional
   ( ) somewhat deviant
   ( ) delusional
   ( ) bizarre

7. Focal concern
   ( ) self
   ( ) sibs
   ( ) parents
   ( ) peers
   ( ) school
   ( ) sex

8. Intellectual impairment
   ( ) none
   ( ) mild
   ( ) moderate
   ( ) severe
   ( ) very severe

9. Memory past
   ( ) poor
   ( ) minor errors
   ( ) accurate

10. Memory present
    ( ) poor
     ( ) minor errors only
     ( ) accurate
11. Judgment
   ( ) extremely poor
   ( ) moderately impaired
   ( ) slightly impaired
   ( ) intact

12. Reality testing
   ( ) good
   ( ) minor distortions
   ( ) somewhat loose
   ( ) very loose
   ( ) totally loose

13. Emotional tone
   ( ) stable
   ( ) anxious
   ( ) depressed
   ( ) moody
   ( ) irritable
   ( ) labile
   ( ) apathetic

14. Affective level
   ( ) flat
   ( ) shallow
   ( ) normal
   ( ) somewhat elated
   ( ) euphoric

15. Affective expression
   ( ) exaggerated
   ( ) appropriate
   ( ) mildly inappropriate
   ( ) moderately inappropriate
   ( ) grossly inappropriate

16. Subjective mood (self-description)
   ( ) grossly depressed
   ( ) moderately depressed
   ( ) mildly depressed
   ( ) average
   ( ) mildly elated

17. Objective mood (projected expression)
   ( ) grossly depressed
   ( ) moderately depressed
   ( ) mildly depressed
   ( ) average
   ( ) mildly elevated
   ( ) moderately elevated
   ( ) extremely elevated

18. Ego strength
   ( ) minimal
   ( ) slight to moderate
   ( ) moderate
   ( ) fairly great
   ( ) very great

19. Level of insight
   ( ) does not acknowledge that she or he has any problem
   ( ) acknowledges the presence of problems but expresses no need for help
   ( ) acknowledges problems and the need for help, but restricts the nature of the help he or she needs (e.g., once a month rather than weekly, from a psychologist rather than a psychiatrist
   ( ) acknowledges problems and the need for help without restrictions, but persists in the view that his or her problems are really organic
( ) acknowledges all the above, but limits his or her problems to be something specific (e.g. dependency, hostility, personal adequacy; or, manifest only at home, away from home, at school; etc.)

( ) acknowledges all the above without restrictions (a level of insight rarely achieved)

20. Symptom pattern
   ( ) immature-narcissistic
   ( ) impulsive-hyperactive
   ( ) hostile-aggressive
   ( ) fearful-anxious
   ( ) withdrawn-inhibited

21. Degree of disturbance
   ( ) mild
   ( ) mild to moderate
   ( ) moderate
   ( ) moderate to severe
   ( ) very severe

22. Motivation for treatment
   ( ) minimal
   ( ) slight to moderate
   ( ) moderate
   ( ) fairly great
   ( ) very great

23. Outlook for the future
   ( ) poor
   ( ) fair
   ( ) good
   ( ) very good
   ( ) excellent
APPENDIX D

Instructions for the TJs
General Rating Instructions

(1) Please rate the four cases in the order they are numbered on the envelopes. For each case, please read the clinical information obtained from the patient before referring to the actuarial information for members of that class of patients. Remember that we are interested in your ability to describe the unique aspects of each adolescent's personality and functioning which may have been overlooked in the actuarial description of the patient.

(2) Please read the instructions for the use of the rating instruments and the actuarial information they contain very carefully.

(3) Please complete the rating materials in the following order:
   1. Past and Present Life Questionnaire
   2. Mental Status Questionnaire
   3. Q-array

(4) Use all three rating instruments to rate each case. A separate set of rating forms, containing the actuarial information for that particular case, accompanies the clinical information for each case.

(5) Please re-shuffle the Q deck before rating a new case.

(6) Please retain only the Q deck. Return all the completed rating sheets and the clinical information for each case as soon as your ratings are complete.

THANK YOU.
PLEASE READ CAREFULLY

INSTRUCTIONS FOR COMPLETING THE MULTIPLE CHOICE QUESTIONNAIRES AND AN EXPLANATION OF THE ACTUARIAL INFORMATION THEY CONTAIN.

To the left of the multiple choice alternatives for each item are the percentage of endorsement of each alternative. These have been derived actuarially for a group of adolescent patients who belong to the same MMPI code type group as the particular patient that is being rated.

Consider the following example:

Reality testing
60 ( ) good
40 ( ) minor distortions
( ) somewhat loose
( ) very loose
( ) totally impaired

This indicated that for adolescent patients who belong to the same MMPI profile group as the case that you are rating, 60% evidenced good reality testing while 40% showed minor distortions. None of the patients were observed to have somewhat loose, very loose, or totally impaired reality testing.

Please check the alternative for each item which in your clinical judgment is most probable for the particular case you are rating. Departure from the actuarial information should be based on your clinical experience using the additional information provided for this particular case.

You will note that at times the percentages given total beyond 100 or less than 100. This indicates that either more than one alternative was chosen or no alternatives were chosen for a given patient in the actuarial group. However, PLEASE ENDORSE ONLY ONE ALTERNATIVE FOR EACH ITEM.
INSTRUCTIONS FOR THE USE OF THE Q ARRAY RECORDING SHEET AND THE ACTUARIAL INFORMATION IT CONTAINS.

PLEASE READ CAREFULLY

The numbers that appear to the left of the scoring columns refer to the Q statements which have been actuarially placed at each level for this particular patient. For example, if the number 83 appears opposite the scoring column for level 1, it represents the average (actuarial) placement of this Q statement for adolescent patients who are members of the same MMPI profile group as the patient you are rating. In this case, the Q statement "Is argumentative" has been empirically assigned to level 1 (least descriptive) for this group of patients.

You may follow the actuarial Q sort distribution for the cases or depart from it as you see fit on the basis of the additional clinical information you have been provided about the individual patient. You may place as many Q statements at each level as you consider appropriate in describing the patient.

Record the number of each Q statement (which appears in the upper left hand corner of the card) in the appropriate column. Record the numbers of all the cards you have placed at level 1 in column 1. Proceed with the cards sorted at level 2, entering the numbers of the cards in column 2. Continue this procedure through column 9, recording the Q card numbers placed at each level in the scoring column for that level.

Once the sort is recorded, shuffle the Q cards well before rating the next case.
The Rorschach examiner is a woman in her early forties who holds a Ph.D. in clinical psychology from Northwestern University and was also a student of S. J. Beck at the University of Chicago. She was born in Sweden and has a slight Swedish accent. She is a highly experienced clinician who has worked extensively with children and adolescents. She is presently in private practice in this community.

All of the Rorschach testing was done in an office in the psychology department of the psychiatric hospital. All of the subjects knew that the sessions were being recorded.

The patients' verbalizations are underlined on the protocols while the examiner's verbalizations are not underlined. The location charts which accompany the protocols were drawn by the examiner.
APPENDIX E

MMPI Profiles of the Four Target Patients and the Mean Profile for their Actuarial Groups
Female

Patient A
Mean Profile 4-6-8 Group
Female

Raw Score with K

K to be added

Raw Score with K

Patient B

Mean Profile 8-4-2 Group
Female

Patient C
Mean Profile 6-8-9 Group
References


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