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RORSCHACH INTERPRETATION AS A FUNCTION
OF INTERPRETER, DEGREE OF INFORMATION
AND SUBJECT'S PERSONALITY

THESIS FOR THE DEGREE OF PH. D.
MICHIGAN STATE UNIVERSITY

ALLEN EUGENE WILLNER

1956

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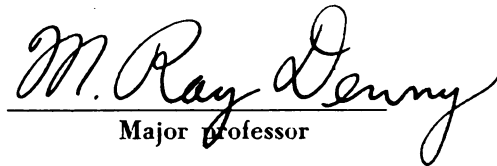
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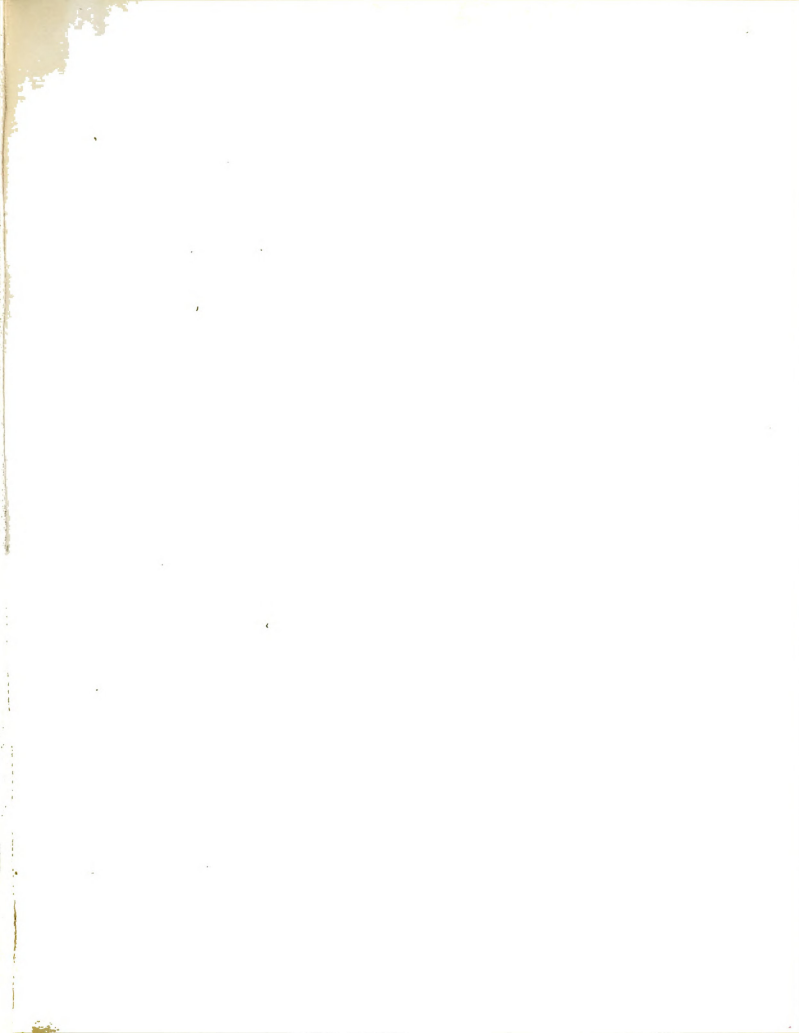
Allen Eugene Willner

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Psychology


Major Professor

Date July 16, 1956



THE INTERPRETATION OF THE RORSCHACH TEST AS A FUNCTION
OF INTERPRETER, DEGREE OF INFORMATION, AND THE
SUBJECT'S PERSONALITY

By

Allen Eugene Willner

AN ABSTRACT

Submitted to the School of Graduate Studies of Michigan
State University of Agriculture and Applied Science
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Psychology

Year 1956

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Allen Eugene Willner

The experiment is concerned with Rorschach interpretation as a function of interpreter, degree of information and subject. The interpreters were 5 staff psychologists at 2 V. A. installations, each of whom had at least 5 years of Rorschach experience. Five degrees of information were employed in the study:

- I. Psychogram. A Beck type scoring summary was used. In cases where the Rorschachs were scored according to another system, the experimenter rescored them according to Beck's system.
- II. Protocol, minus the inquiry.
- III. Core-concepts. These consisted of the major noun from each response in the protocol.
- IV. Psychogram plus core concepts.
- V. The whole record, minus the inquiry.

The stimuli were the Rorschachs of 15 subjects selected from the clinic files. The records were pulled at random from the files and the first 20 which met the following criteria were used:

- (a) Between 20 and 30 responses per record.
- (b) An average of at least six words per response.
- (c) The Rorschach was neither administered nor supervised by any of the interpreters in the experiment.

Five of these twenty Rorschachs were used in a pilot study, and the remaining fifteen were used in the experiment.

The measuring instrument was the Multi-dimensional Scale for Rating Psychiatric Patients (MSRPP), out patient form. The MSRPP has been

factor analyzed into 10 personality factors. The items in eight of these personality-factors were used in the experiment.

Every interpreter received each of the 15 Rorschachs. He was given the Rorschach of any single subject under only one of the five degrees of information. Every interpreter saw a total of three Rorschachs under each of the five degrees of information, and the order in which they saw them was systematically randomized. All interpreters were asked to fill out the MSRPP for each Rorschach they were given. The MSRPP was used as a quantifiable substitute for the usual Rorschach interpretation. The data were analyzed as follows:

- (a) A separate Latin-Square analysis of variance was employed for each of the eight personality-factors of the MSRPP.
- (b) Another Latin-Square analysis of variance was conducted for the scale as a whole. Thus a total of nine analyses were carried out.

A study of the results indicates that

- (a) There are differences in Rorschach interpretation which are attributable to the interpreter rather than to the records presented to him. The data also suggest that personality differences among the interpreters may well account for this effect.
- (b) Changing the amount of information did not seem to affect the Rorschach interpretation. Apparently even the minimal information conditions contained enough information for an interpretation--at least for the MSRPP equivalent of an interpretation.

- (c) The Rorschachs of different subjects were interpreted differently. However, the discrimination involved was coarse rather than fine.

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The writer wishes to express his sincere thanks to Dr. M. Ray Denny, his committee chairman, and to the psychologists of the Detroit Veterans Administration Mental Hygiene Clinic and the Dearborn Veterans Administration Hospital whose suggestions, encouragement and cooperation contributed so greatly to the completion of this dissertation.

He is also greatly indebted to Dr. Donald M. Johnson, Dr. Alfred Dietze, and Dr. A. I. Rabin for their invaluable assistance.

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INTRODUCTION

Most of the Rorschach literature seems to be primarily concerned with the Rorschach as a test. If one focuses his attention upon this point of view, he may ask questions such as these:

What are the reliability and validity of this instrument? What do the various Rorschach determinants measure? How are people who see "M" different from those who do not?

However, there are many other ways in which one may conceptualize the Rorschach situation. For instance, he might regard it like any other projective test, as essentially test plus interpreter, and focus upon the process of interpretation. From such a point of view the Rorschach is regarded primarily as a source of information with which the examiner constructs (and cross-validates) his hypotheses.

The questions which such an orientation suggests are of quite a different order. One would wish to know, "How does an interpreter make an interpretation?" One important variable in this connection would be the personality of the interpreter, and how it affected the interpretations he made. Filer (9) has investigated this problem, using clinical reports, i.e., reports based on a battery of projective tests, rather than on the Rorschach alone. His subjects were 13 male graduate students working toward the Ph D, in Clinical Psychology. Twelve reports were selected from those written by each of the subjects. Specifically, Filer's hypothesis might be paraphrased. The frequencies with which certain interpretations occur in clinical

See "The American People" by J. Edgar Hoover, 1941.

However, there are many other ways in which one may conceptualize the "technical situation". For instance, he might regard it like any other subjective test, or conceivably test him himself, or look upon the process of interpretation. Then again a point of view the Hertzsch is required primarily as a source of information with which the other constants (and cross-constants) in the process.

[illegible]

reports are related to independent measures of the interpersonal behavior of the people who wrote the reports. Filer counted the number of times the report-writers used words describing hostility, passive dependency, etc., in the patient. He also had judges who knew the report-writers rate them on the same variables using several personality inventories, such as the Guilford-Martin GAMIN. The findings were that the dimensions emphasized in the reports of the various examiners were related to ratings of their own personality characteristics.

In order to answer the question: "How does an interpreter make an interpretation?", one must investigate still another preliminary question: "What are the sources of information which the interpreter uses in making his hypotheses?" Do all of the presumed sources provide different kinds of information, or might one dispense with certain sources without the interpretation being affected? In other words, does the amount of information, beyond a certain minimum make any difference at all? One might ask whether interpretations of Rorschach records which consisted only of the psychogram would be any different than interpretations of the whole record. Granted that when one has a whole record he has more information than when he has only a psychogram, the question would be, "Is this additional information (clinically) useful?"

In all the voluminous Rorschach literature there seem to be only two experiments which are addressed to this problem, i.e., what are the sources of information on the Rorschach. Grant, Ives, and Ransoni (11), in the course of a many-faceted inquiry into the reliability and validity of the Rorschach, devoted some time to the

exploration of this problem. In this part of their experiment, three judges rated the adjustment of S's from their Rorschachs. The Rorschachs were presented at three different levels of information:

- (a) Only the scoring Summary.
- (b) Scoring Summary and the Scoring Record.
- (c) Entire record - including the full protocol.

Each judge first rated S under condition A, then condition B, then C. One or two days intervened between the rating and re-rating of the Rorschachs. The measure employed was the percentage agreement between raters. The authors concluded, "Concerning intra-rater agreement there was no particular advantage or disadvantage to using the full Rorschach protocol over the formal aspects alone." The above conclusion may be questioned for several reasons. First, the procedure of having the same judge re-rate the same Rorschach under a different condition of information after only a period of one or two days is very questionable. It is entirely conceivable that after so brief a lapse of time the judge might remember his previous rating and hesitate to change it. Secondly, it should be emphasized that the judges were asked only to rate the adjustment of the S's, not to interpret their Rorschachs. There may well be a great deal of difference between these two tasks, and may not necessarily be much generalization from one to the other.

Caldwell, Ulett, Mensh and Granick (3) also investigated this problem. They used 3 levels of data:

- Level I - Complex - including content and scoring, and seeing the S face-to-face in the testing situation.

Mr. [redacted] advised me that Mr. [redacted] was still in a hospital.

and a corresponding α and β are also available and are listed

for a total of 100,000 copies of the book.

• ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

Michael pointed out the various things that

• Laboratory staff involved - Robert Smith (a)

[illegible][illegible][illegible]

with your own eyes and ears, and I am sure you will be able to

The following information is for informational purposes only and should not be used for any other purpose.

and it is not at all clear that the two boys are the same person.

...entirely conceivably ...

9/19/73 - continued. Two military personnel and unknown male, other, all

1. According to the above, it is not necessary to

... informed about treatment of Jon ... sent to ...

What not least resulted was that he had to go to the hospital.

...written out of my own individualism and formed a likeness for you and me.

at 10:00 a.m. on 11/10/2011. 11/10/2011

What do you think about it?

united and, therefore, are destined to prevail - volume 1, level

Collection added to the post-1945 list

Level II - Only a transcript of the responses which judges could score or not, depending upon their preference.

Level III - Only the psychogram or scoring summary.

The general plan of the study was to compare the consistency of personality ratings by three interpreters: (a) When all interpreters had access to the same level of data, and (b) When each interpreter had access to different levels of data. An experimental group in which levels were varied and a control group where they were held constant, were used. For the experimental group, each interpreter saw one-third of the group under each of the three levels of data. In this way, the idiosyncrastic effects associated with each examiner were divided equally among the three conditions. For the control group, the interpreters all had exactly the same amount of information. The dependent variable in this study was a "weighted" agreement score. This was taken as indicative of the amount of agreement between the three judges, and the score ranged from 6 when agreement was perfect to 1 when there was maximal disagreement. The authors found no significant difference between the mean-weighted agreement scores for the control and experimental groups. They concluded, "Little information is sacrificed by relying on these quantitative data." (i.e., scoring record and summary.)

One might have several reservations about the methodology employed in this study. For one thing, it is somewhat unparsimonious and clumsy. The whole experiment could have been run without ever using a control group; if an analysis of variance type design were employed each subject could have been his own control. Moreover,

Level II - study a number of the responses which subjects gave

open or not, depending upon the level.

Level III - Only the category on semantic memory.

The general aim of the study was to compare the performance of

generally ratings of three conditions: (a) Level II, (b) Level III, and

had access to the same level of data, and (c) Level III, and

had access to different levels of data. An experimental group in

which levels were varied and a control group, which were held con-

stant, were used. For the experimental group, each interpretation was

one-third of the group under each of the same level of data. In

this way, the experimental groups were associated with each condition

was divided equally among the three conditions. For the control

group, the interpreters all had exactly the same amount of information.

The dependent variable in this study was a "subjective" opinion score.

This was taken as an indication of the amount of agreement between the

three judges, and the scores ranged from 0 (no agreement) to 100 (perfect

agreement). It was found that there was no significant difference

between the mean scores between the mean-weighted opinion scores for

the control and experimental groups. They conclude, "Little difference

exists as evidenced by relying on these qualitative data." (p. 10)

(The study was not a true experiment.)

The study has several reservations about the methodology and

applied in this study. For one thing, it is somewhat surprising that

the whole experiment was not a true experiment without any

using a control group in an analysis of variance. In a design where

each subject would have been in a control group.

nowhere in the paper is the weighted agreement score precisely defined. Finally, a weighted agreement score which is based on only a four-point rating scale obviously is not capable of very great precision.

Since the studies cited above seem to leave the issue in doubt, it was decided to incorporate in the present study an investigation of this issue as well as several others. For the purposes of the experiment, the information obtainable from the Rorschach was attributed to three major sources:

1. The psychogram. (A Beck (1) type psychogram was used. Any records which were originally scored by some other system, were rescored by the experimenter in the Beck system.)
2. The core-concepts. For each response in the protocol, only the major noun was selected.
3. Verbalization. All the cues of verbalization such as style of expression, choice of words, vocabulary, etc.

The following questions were asked posed in this paper:

1. Are there certain differences in Rorschach interpretation which are attributable to the interpreter rather than to the records presented to him?
2. "Does increasing the amount of information available affect the Rorschach interpretation?" If this is the case then do all of the various sources of information add information which is necessary for an interpretation?
3. Are the Rorschachs of different patients interpreted differently?

METHODOLOGY

Interpreters

The interpreters were five clinical psychologists, four of whom are staff members of the VA Regional Office, Mental Hygiene Clinic in Detroit, Michigan. The fifth interpreter is a staff member in the Psychology Section of the VA Hospital in Dearborn, Michigan. All interpreters have had at least five years of Rorschach experience.

Rorschachs

The stimulus materials were 20 Rorschach records selected from the clinic files. The records were pulled from the files at random, and the first 20 Rorschachs which met the following criteria were selected for the experiment:

- (a) Between 20 and 30 responses per record.
- (b) An average of at least six words per response.
- (c) The Rorschach was neither administered nor supervised by any of the interpreters in the experiment.

Every record was presented five times, once at each of five levels of information. The five levels of information were designated as Conditions I, II, III, IV, and V.

In Condition I, the Rorschach psychogram alone was interpreted.

In Condition II, the Rorschach free-association alone was interpreted.

Condition III consisted of just the core-concept of each response.

(e.g., the core-concept for the response "Two men in a vicious fight" would be "Two men.")

Condition IV consisted of the psychogram plus the core-concepts of the responses.

Condition V consisted of the whole record, except the inquiry.

Objective Instrument for Rorschach interpretation

An objective personality test was used as a quantifiable substitute for the usual Rorschach report. This was the outpatient form of the Multidimensional Scale for Rating Psychiatric Patients, (MSRPP) (14, 15, 16) Each of the 61 items in this test consists of a question about an aspect of the patient's personality, and a four or six-point scale along which the question may be rated. Each point on the rating scale is expressly defined. A sample item would be:

Compared to others, is he controlled, restrained, inhibited and unable to show feeling, or is he more inclined to be unrestrained, uncontrolled and free in showing emotion?

1	2	3
Conspicuously	Distinctly	A little less
Unrestrained	Unrestrained	restrained
		than average
4	5	6
A little more	Distinctly	Conspicuously
restrained	Restrained	restrained or
than average		frozen

The MSRPP has been used in previous research with patient popu-

(a.e., the concept for the response "two men in a white light") would be "two men".

Condition IV consisted of the same program plus the same concepts of the responses.

Condition V consisted of the whole record, except the history.

Objective Instrument for Rorschach Interpretation

An objective personality test was used as a quantifiable substitute for the usual Rorschach report. This was the output form of the International Scale for Rating Personality (ISRP) (1941, 1942, 1943). Each of the 61 items in this test consists of a question about an aspect of the patient's personality, and a four or six-point scale along which the question may be rated. Each point on the rating scale is explicitly defined. A sample item would be:

Compared to others, is he controlled, restrained, inhibited and liable to show feeling, or is he more inclined to be unrestrained, uncontrolled and free in showing emotion?

1	2	3
Consequently	Characteristically	A little less
Unrestrained	Unrestrained	restrained
than average		
1	2	3
little more	Intensely	Consequently
restrained	restrained	restrained or
than average		more

The ISRP has been used in previous research with patient popu-

lations, and several articles about it appear in the literature. (1974)
Lorr has factor - analyzed the test and described 10 personality factors:

- A. Emotional under-restraint vs. Emotional over-restraint.
- B. Friendly trustfulness vs. Hostile Rebelliousness.
- C. Relaxed comfort vs. anxious tension.
- D. Sense of personal adequacy.
- E. Motivation for long term goals.
- F. Neglectful carelessness vs. Responsible Conscientiousness.
- G. Obsessive-Phobic reaction.
- H. Gastro-intestinal reaction.
- I. Cardio-respiratory reaction.
- J. Sex Conflict.

All of the items included in these personality-factors were used, except for those in factors "H" and "I". These were excluded because they are answerable only from medical histories, and not from Rorschach information. Thus only 45 of the 61 items in the MSRPP were used in this experiment, 1974, the items which measured the remaining eight personality factors.

Procedure

In the experiment proper, fifteen of the twenty Rorschachs were used. (Five had already been used in a pilot study.) Each interpreter was first asked to rate the average clinic patient, given no Rorschach information about him. This amounted to filling out the rating scale for his stereotype of the average clinic patient.

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given the Rorschach of any single patient under only one of the five degrees of information. The amount of information each interpreter received about each Rorschach record is indicated in Table 1. This table also indicates the order in which the interpreters received the records. The interpreters then filled out the MSRPP for each Rorschach.

After these data were collected, the interpreters were asked to rate all the MSRPP items according to their applicability to Rorschach interpretation, i.e., how well they could be answered from Rorschach information.

TABLE 1
EXPERIMENTAL DESIGN

<u>RORSCHACHS</u>		<u>INTERPRETERS</u>				
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
Latin	1	I	II	III	IV	V
Square	2	II	III	IV	V	I
	3	III	IV	V	I	II
	4	IV	V	I	II	III
	5	V	I	II	III	I
Latin	6					
Square	7					
2	8	Replication of Latin Square 1				
	9					
	10					
Latin	11					
Square	12					
3	13	Replication of Latin Square 1				
	14					
	15					

I = Psychogram; II = Protocol; III = Core Concepts;
IV = Psychogram and Core Concepts; V = Whole Rorschach

Statistical Treatment

- I. Personality Factors. A separate statistical analysis was conducted for each of the eight personality factors of the MSRPP scale. For any Rorschach record, the basic datum was the sum of the ratings of all items included in the personality factor under consideration. For example, if emotional restraint was being investigated, for any record, the scores of the various items which comprise this factor would be added together, and the sum recorded. The data for each of the eight personality factors were then analyzed by the Latin Square type of Analysis of Variance (8). The design may be more precisely described as a five-by-five Latin Square, replicated three times, e.g., each group of five Rorschachs constituted one replication.
- II. Analysis of the Whole Interpretation. Any of the eight analyses described above was capable of indicating the effects of the variables studied upon one part of the total interpretation, e.g., the interpretation of one personality factor. Having split the Rorschach interpretation into eight parts for purposes of analysis, it now seemed pertinent to recombine them and study the whole picture. This was accomplished by employing the following method of analysis. A baseline score for the "no information" condition was calculated by taking the median of the ratings ^{of the average clinic patient} by the five interpreters for each item in the MSRPP. Then, the median scores for all items in a personality-factor were summated. When this was repeated for all personality factors in the MSRPP, one score for each of the eight personality variables was obtained. These eight scores constituted

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II. Analysis of the Whole Interpretation. Any of the eight analyses described above was capable of indicating the effects of the variables studied upon one part of the total interpretation, *e.g.*, the interpretation of one personality factor. Having split the Hornsbach interpretation into eight parts for purposes of analysis, it now seemed pertinent to recombine them and study the whole picture. This was accomplished by employing the following method of analysis. A baseline score for the "no information" condition was calculated by taking the median of the ratings by the five interpreters for each item in the MBEP. Then, the median scores for all items in a personality-factor were summed. When this was repeated for all personality factors in the MBEP one score for each of the eight personality variables was obtained. These eight scores constituted

a baseline or "no information" condition. Similarly, for any Rorschach interpretation, the sum of the scores of all the items in a personality factor were computed. Thus, there were eight such scores for any Rorschach interpretation.

The eight personality-factor scores for the baseline condition, and the corresponding eight personality-factor scores for any Rorschach condition, may each be considered as a separate pattern of scores. Statistical measures of pattern similarity have recently been intensively studied (4,7,17,20). The D-score, described by Cronbach and Gleser (5,6), is very sensitive to differences between patterns of scores. In this experiment, D-scores were computed as a measure of the difference between the pattern of scores for the baseline condition, and the pattern of scores for any Rorschach condition. The D-score was computed as follows: For each personality-variable, the baseline score was subtracted from the Rorschach interpretation score. Thus, there were eight deviation scores, one for each personality variable. Each of these eight deviation scores was squared. Next the squared scores were added together, and finally the square root of the sum was taken. The resulting number is the D-score. The 75 (15 Rorschachs x 5 interpreters) D-scores were the data which were used in the statistical analysis. The data were then analyzed by means of analysis of variance.

[illegible]

RESULTS

An examination of Table 3a shows that the ratings of the "average clinic patient" by the five interpreters are very similar. There appears to be a fairly strong "patient" stereotype which also extends to the interpreter in the Dearborn Hospital.

Three major questions were investigated in this study. All of them were evaluated once for each of the eight personality variables in the MSRPP and also for the entire MSRPP scale.

Interpreters

The first question asked whether there were certain differences in Rorschach interpretation which were attributable to the interpreter rather than to the records presented to him. An examination of Table 2i shows that the interpreter variance was significant at or beyond the .001 level of confidence for personality factors B, C, E, and J, and also for the scale as a whole. The interpreter variance was significant at the .01 level for personality factors D and G. However, there was no significant interpreter variance for personality factors A and F, (emotional under-restraint vs emotional over-restraint, and neglectful carelessness vs responsible conscientiousness). Personality factors J and B (sex conflict; and friendly trustfulness vs hostile revelliousness) elicited the greatest amount of interpreter variance.

Thus the first question was answered in the affirmative for all personality factors except A and F. The fact that the interpreter variance was very significant would seem to confirm the hypothesis. However, there are several alternative explanations which must also

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Interpreters

The first question asked whether there were certain differences in Rorschach interpretation which were attributable to the interpreter rather than to the records presented to him. An examination of Table 3b shows that the interpreter variance was significant at or beyond the .001 level of confidence for personality factors A, C, E, and G, and also for the scale as a whole. The interpreter variance was significant at the .01 level for personality factors D and F. However, there was no significant interpreter variance for personality factors A and E, (emotional under-restraint vs emotional over-restraint), and neglecting carelessness vs responsible conscientiousness. Personality factors J and B (non-conflict vs friendly trustfulness vs hostile revolutionaries) elicited the greatest amount of interpreter variance. Thus the first question was answered in the affirmative for all personality factors except A and E. The fact that the interpreter variance was very significant would seem to confirm the hypothesis. However, there are several alternative explanations which must also

be considered. First, these interpreter variances could have resulted from differential sets for filling out rating scales. In other words, the interpreter variance might reflect a sort of rating scale behavior which had nothing to do with the Rorschach. To check this possibility, each interpreter's rating of the average clinic patient was compared with the ratings of the other four interpreters and his deviation from their ratings noted. This gave an example of interpreter variation in a non-Rorschach rating situation. There was very little interpreter variation in the average patient rating. It would be very difficult to explain the large interpreter variance in the experiment in the face of minimal interpreter variation in the average patient rating. Thus, it does not seem likely that the interpreter variance is a function of general rating scale behavior.

Since different modes of interpretation are sometimes emphasized at different installations, a second alternative explanation might be that the interpreter variance was a function of interpreters from two different installations being used in the experiment. However, an examination of the results shows that in no case did the interpreter from the Dearborn Hospital have an extreme score.

It was also possible that the interpreter variance might have been contributed by one deviant interpreter. Actually however, different interpreters were deviant on the various personality factors, and three of the five interpreters differed significantly from the median interpreter on at least one personality factor. Thus it is unlikely that the interpreter variance is a function of: (1) differences in sets for rating scales; (2) different installations where interpreters work, or (3) contributed by just one interpreter.

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Another important finding in this experiment was that the size of the interpreter variance markedly varied from personality factor to personality factor. As an example of the magnitude of this variation, the interpreter variance is 5.93 in the analysis of variance for personality factor F (Table 2f), whereas the interpreter variance in the analysis for personality variable J is 84.97 (Table 2h). The latter variance is 14 times the size of the former, and the difference is obviously significant. Let us explore the possible meanings of this finding. The significant interpreter variance reported previously indicated that there were differences in Rorschach interpretation which were attributable to the interpreter rather than to the records presented to him. The great variation in interpreter variance from one personality-variable to another suggests that the extraneous factor which was introduced may well be related to the personality of the interpreter.

An alternative explanation for the extreme variation of the interpreter variance for different personality-variables might be that the Rorschach was inadequate for measuring some personality variables. However, if this were the case one would ^{not} expect an inflated interpreter variance. The interpreter variance should be unaffected if the Rorschach were inadequate, since there seems to be no reason for interpreters to react differentially in that situation. A complication in this line of reasoning is occasioned by the fact that the different personality factors are composed of different numbers of items. It is possible that the marked differences in interpreter variance among the personality factors might

Another important finding in this experiment was that the size of the interpreter variance markedly varied from personality factor to personality factor. As an example of the magnitude of this variation, the interpreter variance is 6.1% in the analysis of variance for personality factor 1 (Table 21), whereas the interpreter variance in the analysis for personality variable 3 is 84.9% (Table 24). The latter variance is 14 times the size of the former, and the difference is certainly significant. Let us explore the possible meaning of this finding. The significant interpreter variance reported previously indicated that there were differences in Rorschach interpretation which were attributable to the interpreter rather than to the records presented to him. The great variation in interpreter variance from one personality-variable to another suggests that the extraneous factor which was introduced may well be related to the personality of the interpreter.

An alternative explanation for the extreme variation of the interpreter variance for different personality-variables might be that the Rorschach was inadequate for measuring some personality variation. However, if this were the case one would expect an inflated interpreter variance. The interpreter variance should be neglected if the Rorschach were inadequate, since there seems to be no reason for interpreters to react differentially in that situation. A complication in this line of reasoning is occasioned by the fact that the different personality factors are composed of different numbers of items. It is possible that the marked differences in interpreter variance among the personality factors might

be a function of the different numbers of items in the various personality factors. However, when personality factors composed of the same number of items are compared, the differences are still extremely large. For example, personality factors F, D, and J each include four items, yet the interpreter variance for J is 14 times the size of that for F. Similarly, factors A, C and G each have six ^{items} ~~times~~, and the interpreter variance for C is more than six times the size of that for A. Thus the variation in interpreter variance for the different personality factors, does not seem to be explained on the basis of the number of items per personality factor. Apparently, the interpreter variance represents error of interpretation which is a function of the personality of the interpreter.

Degree of Information.

The second question asked whether increasing the amount of information available in Rorschach records affected the interpretation. An examination of Table 21 shows that the conditions variance was not significant for any of the personality-factors, nor for the scale as a whole. The different conditions of information thus had no demonstrable effect upon Rorschach interpretation. Therefore it was not necessary to carry out an investigation of the more specific effects of various conditions such as: verbalization, psychogram, core-concepts and protocols. The results do show that the amount of information has no measurable effect upon interpretation. This suggests that there is a great deal of redundancy in the Rorschach test, since interpreters can make essentially similar interpretations

be a function of the different numbers of items in the various personality factors. However, when personality factors composed of the same number of items are compared, the differences are still extremely large. For example, personality factors F, D, and I each include four items, yet the interpreted variance for I is 14 times the size of that for F. Similarly, factors A, C and G each have six items, and the interpreted variance for G is more than six times the size of that for A. Thus the variation in interpreted variance for the different personality factors, does not seem to be explained on the basis of the number of items per personality factor. Apparently, the interpreted variance represents error of interpretation which is a function of the personality of the interpreter.

Degree of Information.

The second question asked whether increasing the amount of information available in Rorschach records affected the interpretation. An examination of Table XI shows that the conditions variance was not significant for any of the personality-factors, nor for the scale as a whole. The different conditions of information thus had no demonstrable effect upon Rorschach interpretation. Therefore it was not necessary to carry out an investigation of the more specific effects of various conditions such as: verbalization, psychogram, core-concepts and protocols. The results do show that the amount of information has no measurable effect upon interpretation. This suggests that there is a great deal of redundancy in the Rorschach test, since interpreters can make essentially similar interpretations

whether they have the whole record, or only core concepts or summaries.

Subjects.

The third question asked whether the Rorschachs of different patients were interpreted differently. An examination of Table 2d shows that the subject variance was significant at the .01 level of confidence for the scale as a whole, and also for personality factor F (neglectful carelessness vs. responsible conscientiousness.) The subject variance was significant at the .05 level for personality factors A, B, C and D. There was no significant subject variance for personality factors E, G, and J (respectively: motivation for long term goals; obsessive phobic reaction; and sex conflict.)

Thus, the subject variance was generally significant, indicating that the Rorschach can actually differentiate between different subjects, i.e., different ratings given to the different subjects.

Although it has been demonstrated that the Rorschach can differentiate between the different subjects, this does not necessarily mean that there is precise differentiation. For example, if two of the 15 subjects had had very high scores on a personality factor and two had very low scores, with the others more or less bunched together, there might well be a significant subject variance. However, only four of the subjects would actually be discriminated; there would be no differentiation among the other eleven. We might then call this a coarse differentiation, whereas a technique which differentiated nearly all of the subjects from one another would

whether they have the same result, or only come concepts on same level.

subject.

The third question asked whether the formation of different patterns were interpreted differently. An examination of Table 2A shows that the subject variance was significant at the .01 level of confidence for the scale as a whole, and also for personality factor 2 (neglectful carelessness vs. responsible consciousness). The subject variance was significant at the .05 level for personality factors A, B, C and D. There was no significant subject variance for personality factors E, G, and I (respectively: motivation for long term goals; obsessive impulse reaction; and sex conflict).

Thus, the subject variance was generally significant, indicating that the Rorschach can actually differentiate between different subjects, i.e., different ratings given to the different subjects. Although it has been demonstrated that the Rorschach can differ-

entiate between the different subjects, this does not necessarily mean that there is precise differentiation. For example, if two of the 15 subjects had had very high scores on a personality factor and two had very low scores, with the others more or less bunched together, there might well be a significant subject variance. However, only four of the subjects would actually be discriminated; there would be no differentiation among the other eleven. We might then call this a coarse differentiation, whereas a technique which differentiated nearly all of the subjects from one another would

have fine differentiation. Examination of the present data suggests that in the analyses where the subjects were discriminated, there was a coarse rather than a fine differentiation.

Other Findings

The analysis of variance technique used in this experiment permitted the evaluation of several other sources of variance besides those which were pertinent to the three major hypotheses outlined above. These were a Latin Square variance, and two interactions, Interpreters by Latin Square, and Conditions by Latin Square. The Latin Square variance was significant at the .05 level of confidence for personality factors D, E and G. (Table 21) It was not significant for the other 5 personality-factors, nor for the scale as a whole. Each Latin Square was composed of a different group of five Rorschachs so that a significant Latin-Square variance probably reflects differences between the three groups of Rorschachs. Since the Latin-Square variance was significant for personality-factors D, E and G, one may conclude that the three groups of Rorschachs differed in respect to: Sense of personal adequacy, motivation for long-term goals, and obsessive-phobic reaction.

The Interpreter by Latin-Square variance is a measure of the interaction between interpreters and the different groups of subjects. A significant Interpreter by Latin Square variance would indicate a differential reaction by the interpreters to the three groups of Rorschachs, i.e., the different interpreters would vary in their reaction to the groups of Rorschachs. The Interpreter by

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Latin Square Variance was significant at the .05 level for personality factor ^B~~by~~ and for the whole scale, and was significant for no other personality-factors. (Table 21). This would suggest that there was a strong interaction effect for personality-factor B (friendly trustfulness vs. hostile rebelliousness), so strong that it influenced the ratings for the whole scale, even though it appeared in no other personality factor.

The Conditions by Latin-Square Variance is a measure of the interaction between the conditions (different degrees of information) and the three groups of Rorschachs. A significant Conditions by Latin Square Variance would suggest that the conditions had different effects upon interpretation in the three groups of Rorschachs. The Conditions by Latin-Square Variance was significant for personality-factors C (relaxed comfort vs. anxious tension) and D (sense of personal adequacy.) (Table 21)

Results of the "Applicability to Rorschach Interpretation" rating

The results of the rating, by the interpreters, of the applicability to Rorschach interpretation of items in the MSRPP personality factors may be found in Table 4. Personality factors F and A were rated most applicable. It is interesting to note that the same personality factors, A and F, were the only ones which did not elicit significant interpreter variance in the experiment. However, this relationship does not hold for the personality-factors which elicited the largest amount of interpreter variance. It seems that the interpreters regard the personality factors which elicit the

Latin Square Variance was significant at the .05 level for person-
 ality factor 4⁵ and for the whole scale, and was significant for no
 other personality-factors. (Table 21). This would suggest that
 there was a strong interaction effect for personality-factor 4
 (intensity of hostility vs. hostile relationships), so strong that
 it influenced the ratings for the whole scale, even though it ap-
 peared in no other personality factor.

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 interaction between the conditions (different degrees of information)
 and the three groups of Korachach. A significant condition by
 Latin Square Variance would suggest that the conditions had dif-
 ferent effects upon interpretation in the three groups of Korachach.
 The conditions by Latin-Square Variance was significant for
 personality-factors 3 (relaxed comfort vs. anxious tension) and D
 (sense of personal adequacy). (Table 21)

Results of the "Applicability to Korachach Interpretation" rating
 The results of the rating, by the interpreters, of the appli-
 cability to Korachach interpretation of items in the MBEP person-
 ality factors may be found in Table 4. Personality factors 1 and
 4 were rated most applicable. It is interesting to note that the
 same personality factors 1 and 4 were the only ones which did not
 elicit significant interpreter variance in the experiment. However,
 this relationship does not hold for the personality-factors which
 elicited the largest amount of interpreter variance. It seems that
 the interpreters regard the personality factors which elicit the

least interpreter error as most applicable, but they do not necessarily view personality factors which elicit maximal error as least applicable.

TABLE 2a
ANALYSIS OF VARIANCE FOR PERSONALITY FACTOR A
(EMOTIONAL UNDER-RESTRAINT VS. EMOTIONAL
OVER-RESTRAINT)

SOURCE OF VARIANCE	DEGREES OF FREEDOM	SUM OF SQUARES	VARIANCE	F
Conditions	4	25.0	6.25	X
Interpreters	4	40.7	10.17	1.13
Subjects	12	229.0	19.08	2.11 *
Latin Squares	2	52.5	26.25	2.90
Conditions by Latin Squares	8	121.1	15.13	1.67
Interpreters by Latin Squares	8	73.2	9.15	1.01
Residual	36	325.6	9.04	
Total	74	867.1		

* = Significant at .05 level of confidence

X = Variance smaller than error term.

least interpreted error as most applicable, but they do not necessarily view personality factors which affect error as least applicable.

TABLE 2a

ANALYSIS OF VARIANCE FOR PERSONALITY FACTOR A
(EMOTIONAL UNDER-RESTRAINT VS. EMOTIONAL
OVER-RESTRAINT)

VARIANCE	COURSE OF	DEGREES OF	SUM OF	VARIANCE	F
		FREEDOM	SQUARES		
Conditions		4	22.0	6.25	X
Interpreters		4	46.7	10.17	1.13
Subjects		12	229.0	19.08	2.11 *
Latin Squares		2	22.2	26.25	2.20
Conditions by Latin Squares		8	121.1	12.13	1.67
Interpreters by Latin Squares		8	73.2	2.12	1.01
Residual		36	322.6	3.04	
Total		76	863.1		

* = Significant at .05 level of confidence
X = Variance smaller than error term.

TABLE 2b
ANALYSIS OF VARIANCE FOR PERSONALITY-FACTOR B
(FRIENDLY TRUSTFULNESS VS. HOSTILE
REBELLIOUSNESS)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	21.7	4	5.42	X
Interpreters	339.7	4	84.93	10.64***
Subjects	205.7	12	17.14	2.15*
Latin Squares	28.9	2	14.45	1.81
Conditions by Latin Squares	70.6	8	8.83	1.11
Interpreters by Latin Squares	155.8	8	19.48	2.44
Residual	287.2	36	7.98	
Total	1,109.6	74		

* Significant at .05 level of confidence

*** Significant at .001 level of confidence

X = Variance smaller than error term

TABLE 22
ANALYSIS OF VARIANCE FOR PERMANENT-TREATMENT B
(FINDING ESTIMATION AND VARIANCE)
(REPRESENTATIVENESS)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREE OF FREEDOM	ANALYSIS OF VARIANCE F
Conditions	11.7	4	5.62
Interpretors	339.7	4	64.93
Subjects	705.7	12	13.14
Latin Squares	28.9	2	14.45
Conditions by Latin Squares	70.6	8	8.83
Interpretors by Latin Squares	152.3	8	19.48
Residual	287.2	16	7.99
Total	1,109.6	36	

* Significant at .05 level of confidence
 ** Significant at .001 level of confidence
 X = Variance smaller than error term

TABLE 2c

ANALYSIS OF VARIANCE FOR PERSONALITY-FACTOR C
(RELAXED COMFORT VS. ANXIOUS TENSION)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	55.4	4	13.85	2.04
Interpreters	261.0	4	65.25	9.61***
Subjects	179.4	12	14.95	2.20*
Latin Squares	43.4	2	21.70	3.20
Conditions by Latin Squares	126.6	8	15.83	2.33*
Interpreters by Latin Squares	105.6	8	13.20	1.94
Residual	244.6	36	6.79	
Total	1,016.0	74		

* Significant at .05 Level of Confidence

*** Significant at .001 Level of Confidence

TABLE 2c

ANALYSIS OF VARIANCE FOR PERSONALITY-ANALYSIS C
(RELAXED COMFORT VS. ANXIOUS TENSION)

VARIANCE	SOURCE OF	SUM OF	DEGREES OF	VARIANCE	F
		SQUARES	FREEDOM		
2.04	Conditions	55.4	4	14.6	
9.61**	Interpreters	201.0	4	60.25	
2.20*	Subjects	179.4	12	14.95	
3.20	Latin Squares	43.4	2	21.70	
2.33*	Conditions by Latin Squares	120.0	8	15.00	
1.24	Interpreters by Latin Squares	102.0	8	12.75	
	Residual	244.0	30	8.13	
	Total	1,010.0	74		

* Significant at .05 Level of Confidence

** Significant at .001 Level of Confidence

TABLE 2d
ANALYSIS OF VARIANCE FOR PERSONALITY-FACTOR D
(SENSE OF PERSONAL ADEQUACY)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	24.8	4	6.12	1.59
Interpreters	87.2	4	21.80	5.67**
Subjects	94.0	12	7.83	2.04*
Latin Squares	32.7	2	16.35	4.25*
Conditions by Latin Squares	76.7	8	9.59	2.50*
Interpreters by Latin Squares	15.6	8	1.95	X
Residual	138.3	36	3.84	
Total		74		

* Significant at .05 Level of Confidence

** Significant at .01 Level of Confidence

X $\pm$ Variance smaller than error term

TABLE 22
ANALYSIS OF VARIANCE FOR TREATMENT-CONTROL
(METHOD OF MINERAL ADJUNCT)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F
Conditions	24.8	4	6.2	1.72
Interpretors	81.2	4	20.3	2.64**
Subjects	94.0	12	7.83	2.04*
Latin Squares	30.7	2	15.35	4.22*
Conditions by Latin Squares	70.7	8	8.84	2.20*
Interpretors by Latin Squares	12.6	8	1.58	X
Residual	126.2	30	4.21	
Total		44		

* Significant at .05 level of confidence
 ** Significant at .01 level of confidence
 X = Variance smaller than error term

TABLE 2e
ANALYSIS OF VARIANCE FOR PERSONALITY-FACTOR E
(MOTIVATION FOR LONG-TERM GOALS)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREE OF FREEDOM	VARIANCE	F
Conditions	20.0	4	5.00	X
Interpreters	237.3	4	59.32	8.40***
Subjects	75.9	12	6.33	X
Latin Squares	51.9	2	25.95	3.68*
Conditions by Latin Squares	62.3	8	7.78	1.10
Interpreters by Latin Squares	67.4	8	8.43	1.19
Residual	254.2	36	7.06	
Total	769.0	74		

* Significant at .05 Level of Confidence

** Significant at .001 Level of Confidence

X = Variance smaller than error term

TABLE 2
ANALYSIS OF VARIANCE FOR PERSONALITY-FACTORS
(MOTIVATION FOR LONG-TERM GOALS)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREE OF FREEDOM	VARIATION	F
Conditions	20.0	4	5.00	X
Interpreters	237.6	4	59.40	***
Subjects	7.9	11	0.72	
Latin Squares	21.9	2	10.95	**
Conditions by Latin Squares	61.3	8	7.66	1.10
Interpreters by Latin Squares	84.4	8	10.55	1.12
Residual	224.2	36	6.23	
Total	760.0	76		

* Significant at .05 level of confidence
 ** Significant at .01 level of confidence
 X = Variance smaller than error term

TABLE 2f

ANALYSIS OF VARIANCE FOR PERSONALITY FACTOR F
(NEGLECTFUL CARELESSNESS VS. RESPONSIBLE
CONSCIENTIOUSNESS)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	21.2	4	5.30	
Interpreters	23.7	4	5.93	1.57
Subjects	136.7	12	11.39	3.01**
Latin Squares	10.6	2	5.30	
Conditions by Latin Squares	50.9	8	6.36	1.68
Interpreters by Latin Squares	18.4	8	2.30	X
Residual	136.4	36	3.78	
Total		74		

** Significant at the .01 Level of Confidence

X = Variance smaller than error term

TABLE 2
ANALYSIS OF VARIANCE FOR PERSONALITY-1 AND 2
(MANIPULATION OF INTERESTS VS. PERSONALITY
CORRELATION)

SOURCE OF VARIANCE	SS OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	21.3	1	21.30	
Interpreters	20.7	1	20.70	1.32
Subjects	136.7	12	11.39	3.00**
Latin Squares	10.6	2	5.30	
Conditions by Latin Squares	20.9	2	10.45	1.38
Interpreters by Latin Squares	18.1	2	9.05	X
Residual	1.4	30	0.47	
Total		47		

** Significant at the .01 level of Confidence

X = Variance smaller than error term

TABLE 2g
ANALYSIS OF VARIANCE FOR PERSONALITY-FACTOR G
(OBSESSIVE-PHOBIC REACTION)

SOURCE OF VARIANCE	SUM OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	28.5	4	7.12	1.04
Interpreters	150.7	4	37.67	5.51***
Subjects	108.4	12	9.03	1.32
Latin Squares	54.9	2	27.45	4.01*
Conditions by Latin Squares	110.3	8	13.78	2.01
Interpreters by Latin Squares	70.1	8	8.76	1.28
Residual	246.4	36	6.84	
Total	769.7	74		

* Significant at the .05 Level of Confidence

** Significant at the .001 Level of Confidence

TABLE 24
ANALYSIS OF VARIANCE FOR REACTIVITY-PAW-03-2
(OBTAINING-REACTIVITY-PAW-03-2)

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	28.5	4	7.12	1.04
Interpreters	120.7	4	30.17	2.21***
Subjects	108.4	12	9.03	1.32
Latin squares	24.9	2	12.45	1.00*
Conditions by Latin squares	110.3	8	13.78	2.01
Interpreters by Latin squares	70.1	8	8.76	1.28
Residual	246.4	20	12.32	
Total	769.7	34		

* Significant at the .05 level of Confidence
** Significant at the .001 level of Confidence

TABLE 2h
ANALYSIS OF VARIANCE FOR PERSONALITY-FACTOR J
(SEX-CONFLICT)

SOURCE OF VARIANCE	SUMS OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	11.9	4	2.98	
Interpreters	337.1	4	84.97	21.12***
Subjects	55.6	12	4.63	1.16
Latin Squares	17.3	2	8.65	2.16
Conditions by Latin Squares	30.1	8	3.76	
Interpreters by Latin Squares	38.1	8	4.76	1.19
Residual	143.6	36	1.19	
Total		74		

*** Significant at the .001 Level of Confidence

TABLE 2A
ANALYSIS OF VARIANCE FOR PERSONALITY-ERROR 1
(SEM-COMMITTEE)

SCORES OF VARIANCE	DEGREES OF FREEDOM	MEAN SQUARE	VARIANCE RATIO
Conditions	4	11.9	2.98
Interpreters	4	127.1	31.72
Subjects	12	22.6	4.63
Latin Squares	2	17.3	8.62
Conditions by Latin Squares	8	30.1	7.76
Interpreters by Latin Squares	8	30.1	4.76
Residual	32	14.6	1.12
Total	44		

*** Significant at the .001 level of confidence

TABLE 21

A SUMMARY, FOR ALL PERSONALITY FACTORS, OF SIGNIFICANCE
VALUES OF THE ANALYSES OF VARIANCE

Variance	<u>PERSONALITY FACTOR</u>								Total
	A	B	C	D	E	F	G	J	
Interpreter	x	.001	.001	.01	.001	x	.01	.001	.001
Conditions	x	x	x	x	x	x	x	x	x
Subject	.05	.05	.05	.05	x	.01	x	x	.01
Latin Square	x	x	x	.05	.05	x	.05	x	x
Interpreter by Latin Squares	x	.05	x	x	x	x	x	x	.05
Conditions by Latin Squares	x	x	.05	.05	x	x	x	x	x

x = Not Significant

TABLE 24
A SUMMARY FOR ALL PERSONALITY FACTORS OF SIGNIFICANCE
VALUES OF THE ANALYSIS OF VARIANCE

PERSONALITY FACTORS									
Variance	A	B	C	D	E	F	G	H	Total
Interpreter	x	.001	.001	.01	.001	x	.01	.001	.001
Conditions	x	x	x	x	x	x	x	x	x
Subject	.02	.02	.02	.02	x	.01	x	x	.01
Latin squares	x	x	x	.02	.02	x	.02	x	x
Interpreter by Latin squares	x	.02	x	x	x	x	x	x	.02
Conditions by Latin squares	x	x	.02	.02	x	x	x	x	x

x = Not Significant

TABLE 3a

RATINGS BY FIVE INTERPRETERS OF THE AVERAGE CLINIC PATIENT

MSRPP ITEM	INTERPRETERS				
	A	B	C	D	E
1	4	5	5	4	5
2	2	3	4	2	2
4	5	5	5	6	4
5	5	4	3	5	5
6	4	3	3	3	2
7	5	3	5	4	5
8	4	4	4	4	4
9	5	3	4	4	5
10	3	3	2	3	3
11	5	4	5	5	4
12	4	4	2	2	4
13	3	3	3	2	3
14	2	2	2	3	3
15	3	3	2	2	3
16	4	4	5	5	4
17	5	4	6	5	5
18	4	4	5	5	3
19	5	4	5	4	5
20	2	2	2	2	2
21	5	5	6	4	5
22	3	4	4	5	4
23	1	3	2	2	2
24	5	5	6	5	5
25	5	5	5	4	5
26	4	4	6	4	3
27	2	3	2	3	2
28	3	3	3	3	3
29	3	3	4	2	3
30	4	4	5	4	4
31	5	5	5	4	5
32	5	5	5	5	5
33	2	3	2	2	2
34	5	4	5	5	5
35	5	5	6	5	5
36	2	2	1	2	6
37	2	4	3	3	3
39	2	4	2	2	3
41	2	2	2	2	2
43	2	3	1	2	3
53	2	4	5	5	5
54	3	4	3	3	3
55	3	3	3	4	2
57	3	3	4	4	4
58	5	4	4	4	4
61	3	3	3	3	3

TABLE 3a

RATINGS BY FIVE INVESTIGATORS OF THE VARIOUS OTHERS IN INDIA

RANK	INVESTIGATORS				
	A	B	C	D	E
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9
10	10	10	10	10	10
11	11	11	11	11	11
12	12	12	12	12	12
13	13	13	13	13	13
14	14	14	14	14	14
15	15	15	15	15	15
16	16	16	16	16	16
17	17	17	17	17	17
18	18	18	18	18	18
19	19	19	19	19	19
20	20	20	20	20	20
21	21	21	21	21	21
22	22	22	22	22	22
23	23	23	23	23	23
24	24	24	24	24	24
25	25	25	25	25	25
26	26	26	26	26	26
27	27	27	27	27	27
28	28	28	28	28	28
29	29	29	29	29	29
30	30	30	30	30	30
31	31	31	31	31	31
32	32	32	32	32	32
33	33	33	33	33	33
34	34	34	34	34	34
35	35	35	35	35	35
36	36	36	36	36	36
37	37	37	37	37	37
38	38	38	38	38	38
39	39	39	39	39	39
40	40	40	40	40	40
41	41	41	41	41	41
42	42	42	42	42	42
43	43	43	43	43	43
44	44	44	44	44	44
45	45	45	45	45	45
46	46	46	46	46	46
47	47	47	47	47	47
48	48	48	48	48	48
49	49	49	49	49	49
50	50	50	50	50	50

TABLE 3b
ANALYSIS OF VARIANCE FOR THE WHOLE INTERPRETATION

SOURCE OF VARIANCE	SUMS OF SQUARES	DEGREES OF FREEDOM	VARIANCE	F
Conditions	41.2	4	10.3	1.51
Interpreters	489.4	4	122.3	17.98***
Subjects	251.1	12	20.9	3.07**
Latin Squares	17.7	2	8.8	1.29
Interpreters by Latin Squares	137.8	8	17.2	2.52*
Conditions by Latin Squares	87.5	8	10.9	1.60
Residual	246.1	36	6.8	
Total	1,270.8	74		

* Significant at .05 Level of Confidence

** Significant at .01 Level of Confidence

*** Significant at .001 Level of Confidence

TABLE 30
ANALYSIS OF VARIANCE FOR THE WHOLE EXPERIMENTATION

SOURCE OF VARIANCE	SUMS OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F
Residual	246.1	36	6.8	
Latin Squares	87.5	8	10.9	1.60
Interpreters by Latin Squares	137.8	8	17.2	2.52*
Latin Squares	13.7	2	6.8	1.29
Subjects	251.1	12	20.9	3.07**
Interpreters	489.4	4	122.3	17.98***
Conditions	41.4	4	10.3	1.51
Total	1,520.8	74		

*** Significant at .001 Level of Confidence
 ** Significant at .01 Level of Confidence
 * Significant at .05 Level of Confidence

TABLE 4

RATINGS BY FIVE INTERPRETERS OF THE APPLICABILITY TO RORSCHACH
INTERPRETATION OF ITEMS IN THE EIGHT PERSONALITY-FACTORS
OF THE MSRPP

Interpreter	Personality-Factors							
	A	B	C	D	E	F	G	J
a	2.7	2.4	2.0	2.0	1.6	3.5	2.5	2.0
b	2.7	2.9	2.2	2.8	2.3	3.3	2.5	2.3
c	3.2	3.0	2.7	2.8	2.1	3.5	3.2	3.3
d	4.2	3.3	3.3	2.8	3.0	4.3	2.7	2.5
e	3.8	3.0	3.2	3.5	2.0	3.8	3.3	2.3
Mean	3.3	2.9	2.7	2.8	2.2	3.7	2.8	2.5

TABLE 4

INTERPRETATION OF TRENDS IN THE WEIGHT FACTOR-FACTORS
OF THE MODEL
BASED ON FIVE INTERPRETATIONS OF THE WEIGHT FACTOR-FACTORS

Interpreted	Factorial-factors					
	A	B	C	D	E	F
a	2.7	2.4	2.0	2.0	1.0	3.3
b	2.7	2.9	2.0	2.8	2.1	2.3
c	2.2	3.0	2.7	2.8	2.1	3.3
d	4.2	3.2	2.2	2.8	2.0	2.3
e	2.8	2.0	2.2	2.2	2.0	2.3
Mean	2.3	2.9	2.7	2.8	2.2	2.3

DISCUSSION

Interpreters

Three questions were posed in this study. The first question asked whether there were certain differences in Rorschach interpretation which were attributable to the interpreter rather than the records presented to him. This question was answered in the affirmative for the entire MSRPP scale and also for six of the eight personality factors composing the scale. Only for these personality factors was the question answered in the negative: emotional under-restraint vs. emotional over-restraint; and neglectful carelessness vs. responsible conscientiousness. Thus the interpreters seem to be introducing something extraneous into their interpretations for all personality variables except the latter two. For some reason, this kind of interpreter error is minimized in these personality variables.

It was also found that the size of the interpreter variance markedly varied from personality factor to personality factor. As was shown above, this may well represent errors of interpretation which are a function of the personality of the interpreter. This observation is related to that of Filer (9) who found that the points emphasized in clinician's reports were related to ratings of their own personality characteristics.

DISCUSSION

Interpreters

Three questions were posed in this study. The first question asked whether there were certain differences in Rorschach interpretation which were attributable to the interpreter rather than the records presented to him. This question was answered in the affirmative for the entire KERP scale and also for six of the eight personality factors composing the scale. Only for these personality factors was the question answered in the negative: emotional under-restraint vs. emotional over-restraint; and negligible carelessness vs. responsible conscientiousness. Thus the interpreters seem to be introducing something extraneous into their interpretations for all personality variables except the latter two. For some reason, this kind of interpreter error is minimized in these personality variables.

It was also found that the size of the interpreter variance markedly varied from personality factor to personality factor. As was shown above, this may well represent errors of interpretation which are a function of the personality of the interpreter. This observation is related to that of Miller (2) who found that the points obtained in clinician's records were related to ratings of their own personality characteristics.

Degrees of Information

The second question asked whether increasing the amount of information available in Rorschach records affected the interpretation of the records. This question was not answered in the affirmative in any of the analyses. However, it was shown above that interpreters can discriminate between the S's who took the Rorschachs. Since the interpreters can discriminate the subjects, and since the only information they had was Rorschach information, they must have used this Rorschach information. But, it was found that different amounts of information do not result in changes in Rorschach ratings. The most reasonable explanation for these findings would seem to be that the minimal information conditions, the core-concepts and the scoring summary, contain enough information to make an interpretation. In other words the Rorschach would seem to be a highly redundant test, with much more information available than the bare minimum needed to sketch out an interpretation. This redundancy, of course, is a very useful property of the Rorschach. If the test were not so redundant, one would not have an opportunity for the constant checking and cross-checking of hypotheses which most clinicians believe essential to valid Rorschach interpretation.

These findings have a direct bearing upon the experiments of Grant, Ives and Ranzoni (11), and Caldwell, et al (3). In both these studies, Rorschach psychograms and successively larger units of information were interpreted by clinicians. No differences in interpretation were found in either study with various degrees of

Degree of Information

The second question asked whether increasing the amount of information available in Rorschach records affected the interpretation of the records. This question was not answered in the affirmative in any of the analyses. However, it was shown above that interpreters can discriminate between the S's who took the Rorschachs, since the interpreters can discriminate the subject, and since the only information they had was Rorschach information, they must have used this Rorschach information. But, it was found that different amounts of information do not result in changes in Rorschach ratings. The most reasonable explanation for these findings would seem to be that the minimal information conditions, the core-concepts and the scoring summary, contain enough information to make an interpretation. In other words the Rorschach would seem to be a highly redundant test, with much more information available than the bare minimum needed to sketch out an interpretation. This redundancy, of course, is a very useful property of the Rorschach. If the test were not so redundant, one would not have an opportunity for the constant checking and cross-checking of hypotheses which most clinicians believe essential to valid Rorschach interpretation.

These findings have a direct bearing upon the experiments of Grant, Ives and Hanson (11), and Galloway, et al (2). In both these studies, Rorschach psychograms and uncorrelated T-scores with information were interpreted by clinicians. No differences in interpretation were found in either study with various degrees of

information. Caldwell, et. al. concluded that "...the quantitative categories into which Rorschach responses may be translated represent meaningful behavioral attributes and that...little information is sacrificed by relying solely on these quantitative data." Grant et. al. concluded: "Concerning intra-rater agreement, there was no particular advantage or disadvantage to using the full Rorschach protocol over the formal aspects alone."

Considering the results of these two experiments and also the present one, we may be able to formulate a more general explanation. In the two previous experiments there was only one minimal information condition, the psychogram (or scoring record.) One could not differentiate between effects resulting from the psychogram as a minimal information condition, and effects due to some special property of the psychogram itself, e.g., its quantitative nature. In the present experiment however, there are two minimal information conditions, the core-concepts and the psychogram. One can differentiate between effects due to minimal information conditions and those due to special properties of the psychogram. The finding is that there is no difference between interpretations based upon any of the sources of information. Thus, the conclusion seems to be that additional information, beyond that in the minimal information condition makes no difference in interpretation. The results here do not support Caldwell's et. al. assumption that their results were due to ^aspecial property of the psychogram, since there was no difference between interpretations based upon core-concepts or psychogram.

information. (Gibson, *et al.*, concluded that "...the quantitative categories into which Thorndike responses may be classified represent meaningful behavioral attributes and that...the information is extracted by relying solely on these quantitative data." Grant *et al.* concluded: "Concerning intra-trial agreement, there was no particular advantage or disadvantage to using the full Thorndike protocol over the formal aspects alone."

Concerning the results of these two experiments and also the present one, we may be able to formulate a more general explanation. In the two previous experiments there was only one minimal information condition, the psychogram (or memory record). One could not differentiate between effects resulting from the psychogram as a minimal information condition, and effects due to some special property of the psychogram itself, e.g., its quantitative nature. In the present experiment however, there are two minimal information conditions, the core-concepts and the psychogram. One can differentiate between effects due to minimal information conditions and those due to special properties of the psychogram. The finding is that there is no difference between interpretations based upon any of the sources of information. Thus, the conclusion seems to be that additional information, beyond that in the minimal information condition, makes no difference in interpretation. The results here do not support Goldwell's *et al.* assumption that their results were due to special property of the psychogram, since there was no difference between interpretations based upon core-concepts or psychogram.

Rorschachs

The third question asked whether the Rorschachs of different patients were interpreted differently. This question was answered affirmatively for the MSRPP scale as a whole, and for five of the eight personality factors. It was not so answered for these personality factors: motivation for long term goals; obsessive-phobic reaction; and sex conflict.

Apparently the interpreters were not able to distinguish between the Rorschachs at all on these three personality factors. Also, as was mentioned above, where the interpreters were able to discriminate between the Rorschachs, the discrimination was coarse rather than fine. In other words, although some individuals were discriminated from the group, many were not. Thus, although the hypothesis was generally borne out, there exists much room for improvement in Rorschach interpretation.

Generally, however, the interpreters can differentiate between the Rorschachs of different subjects; i.e., the same things are not said for all subjects. This, of course, is a necessary pre-condition for establishing the validity of the Rorschach test. For, if Rorschach interpretations could not distinguish between different subjects, the test could not be valid. However, this study by no means establishes the validity of the Rorschach test, since there was no provision for evaluating the accuracy of the interpreters, i.e., no criterion group was included.

Korsbachs

The third question asked whether the Korsbachs of different patients were interpreted differently. This question was answered affirmatively for the MBHP scale as a whole, and for five of the eight personality factors. It was not so answered for these personality factors: motivation for long term goals; obsessive-phobic reaction; and sex conflict.

Apparently the interpreters were not able to distinguish between the Korsbachs at all on these three personality factors. Also, as was mentioned above, where the interpreters were able to discriminate between the Korsbachs, the discrimination was coarse rather than fine. In other words, although some individuals were discriminated from the group, many were not. Thus, although the hypothesis was generally borne out, there exists much room for improvement in Korsbach interpretation.

Generally, however, the interpreters can differentiate between the Korsbachs of different subjects; i.e., the two things are not said for all subjects. This, of course, is a necessary pre-condition for establishing the validity of the Korsbach test. Now, if Korsbach interpretations could not distinguish between different subjects, the test could not be valid. However, this study by no means establishes the validity of the Korsbach test, since there was no provision for evaluating the accuracy of the interpreters, i.e., no criterion group was included.

Implications

This study may be viewed as an exploratory attempt at locating the variables pertinent to Rorschach interpretation. It is just a beginning, and a series of experiments would undoubtedly be needed to investigate more fully the nature of these variables and their interrelations. For example, the results of this study are a function of the test-instrument used. The rating scale used here is very different from the usual "written out" clinical interpretation of the Rorschach. The use of the rating scale undoubtedly is a restriction on the freedom of expression that the clinician has in the more conventional Rorschach report. In this study, the subtlety of expression of the usual written interpretation was sacrificed in favor of the quantifiability of the rating scale. It would be well to replicate it using other test instruments and, if possible, full clinical reports.

The results of this study are also a function of the particular interpreters used. It might well be replicated with other interpreters, to investigate the extent to which findings are specified to the interpreters who participated, rather than interpreters in general. For instance, it was noted above that there was negligible interpreter error on two personality factors. It seems quite possible that a study using different interpreters might find that they had minimal error on different personality factors.

With respect to the group of Rorschachs used, it seems less likely that the results might be of limited generality, since the

Interpretations

This study may be viewed as an exploratory attempt at locating the variables pertinent to Rorschach interpretation. It is just a beginning, and a series of experiments would undoubtedly be needed to investigate more fully the nature of these variables and their interactions. For example, the results of this study are a function of the test-instrument used. The rating scale used here is very different from the usual "written out" clinical interpretation of the Rorschach. The use of the rating scale undoubtedly is a restriction on the freedom of expression that the clinician has in the more conventional Rorschach report. In this study, the ambiguity of these signs of the usual written interpretation was sacrificed in favor of the quantifiability of the rating scale. It would be well to replicate it using other test instruments and, if possible, with clinical reports.

The results of this study are also a function of the particular interpreters used. It might well be replicated with other interpreters, to investigate the extent to which findings are specific to the interpreters who participated, rather than interpreters in general. For instance, it was noted above that there was replicable inter-rater error on two personality factors. It seems quite possible that a study using different interpreters might find that they had minimal error on different personality factors.

With respect to the group of Rorschachs used, it seems likely that the results might be of limited generality, since the

sample was fairly large and selected at random from a large population.

Validity of the Rorschach

The question of validity was not investigated here because it was felt that this would tend to overcomplicate an already complicated experimental design. However, this type of experiment could provide information about the validity of the Rorschach if a suitable criterion were available.

SUMMARY

Five clinical psychologists interpreted 15 Rorschachs which varied in degree of completeness of information. The degree of information varied from the psychogram or core concepts to the entire Rorschach record. All interpreters were asked to fill out a personality inventory, MSRPP, for each Rorschach they were given. The MSRPP was used as a quantifiable substitute for the usual Rorschach interpretation. The data were analyzed by the Latin Square type of analysis of variance. A study of the results indicate that:

(a) There are differences in Rorschach interpretation which are attributable to the interpreter rather than the records presented to him. The results also suggest that personality differences among the interpreters may well account for this effect.

(b) Changing the amount of information available did not seem to affect the Rorschach interpretation. Apparently even the minimal information conditions contained enough information for an interpretation—at least for the rating scale equivalent of an interpretation.

(c) The Rorschachs of different patients were interpreted differently. However, the discrimination involved was coarse rather than fine.

SUMMARY

Five clinical psychologists interpreted 15 Rorschach inkblots which varied in degree of completeness of information. The degree of information varied from the psychogram or core concepts to the entire Rorschach record. All interpreters were asked to fill out a person-

ality inventory, MMPI, for each Rorschach they were given. The MMPI was used as a quantifiable substitute for the usual Rorschach interpretation. The data were analyzed by the Latin Square type of analysis of variance. A study of the results indicates that:

(a) There are differences in Rorschach interpretation which are attributable to the interpreter rather than the records presented to him. The results also suggest that personality differences among the interpreters may well account for this effect.

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(c) The Rorschachs of different patients were interpreted differently. However, the discrimination involved was coarse rather than fine.

BIBLIOGRAPHY

1. Beck, S. J. Rorschach's Test. Vol. I Basic Processes
Grune & Stratton, New York, 1950.
2. _____. Rorschach's Test. Vol. II A Variety of
Personality Pictures, Grune & Stratton, New York, 1950.
3. Caldwell, B. Mc D., Vlett, G. A., Menah, I. N. and Granick, S.
Levels of data in Rorschach Interpretation. J. Clin. Psychol.
1952, 8, 374-379.
4. Cattell, R. B. rp and other coefficients of pattern similarity.
Psychometrika, 1949, 14, 279-298.
5. Cronbach, L. J. "Pattern Tabulation.": A statistical method
for analysis of limited patterns of scores, with particular
reference to the Rorschach test. Educ. Psychol. Measmt.,
1949, 9, 149-171.
6. _____, and Gleser, G. C. Assessing Similarity between
profiles. Psychol. Bull., 1953, 50, 456-473.
7. DuMas, F. M. A quick method for analyzing the similarity of
profiles. J. Clin. Psychol., 1946, 2, 80-83.
8. Edwards, A. E. Experimental design in psychological research.
Rinehart & Co., Inc., New York, 1950.
9. Filer, R. The Clinicians Personality and his case reports.
Unpublished Ph D. dissertation. University of Michigan.
10. Gaier, E. L. and Lee, M. C. Pattern Analysis: The configural
approach to predictive measurement. Psychol. Bull., 1953,
50, 140-148.
11. Grant, M. Q., Ives, V. and Ranzoni, J. H. Reliability and
validity of judges ratings of adjustment on the Rorschach.
Psychol. Monographs, 1952, 66, (2) 20 p.
12. Klopfer, B., Ainsworth, M., Klopfer W., and Holt, R.
Developments in the Rorschach technique. Yonkers, N. Y.
World Book Company, 1954.
13. _____ and Kelly, D. The Rorschach Technique. Yonkers,
N. Y. World Book Company, 1954.

BIBLIOGRAPHY

1. Beck, S. J. Rorschach's Test. Vol. I Basic Processes
Crime & Stratton, New York, 1950.
2. _____ Rorschach's Test. Vol. II A Variety of
Personality Pictures, Crime & Stratton, New York, 1950.
3. Caldwell, B. Mc D., Viett, C. A., Marsh, J. W. and Granick, S.
Levels of data in Rorschach interpretation. J. Clin. Psychol.
1952, 8, 344-379.
4. Cattell, R. S. rp and other coefficients of pattern similarity.
Psychometrika, 1949, 14, 229-298.
5. Cronbach, L. J. "Test-retest Reliability": A statistical method
for analysis of limited patterns of scores, with particular
reference to the Rorschach test. Psychol. Monographs,
1949, 6, 149-171.
6. _____ and Gleason, G. C. Assessing similarity between
profiles. Psychol. Bull., 1952, 50, 456-473.
7. Dawes, E. M. A quick method for analyzing the similarity of
profiles. J. Clin. Psychol., 1946, 2, 80-83.
8. Edwards, A. W. Experimental design in psychological research.
Rinehart & Co., Inc., New York, 1950.
9. Eimer, N. The Othello syndrome personality and his case reports.
Unpublished Ph.D. dissertation. University of Michigan.
10. Gater, D. L. and Lee, H. C. Pattern Analysis: The comparison
approach to predictive measurement. Psychol. Bull., 1952,
50, 140-145.
11. Grant, M. L., Ives, V. and Hanson, J. M. Reliability and
validity of judges ratings of adjustment on the Rorschach.
Psychol. Monographs, 1952, 66, (2) 20 p.
12. Klopfer, B. J., Atkinson, M., Klopfer, W. L. and Wolf, M.
Developments in the Rorschach technique. Yonkers, N. Y.
World Book Company, 1954.
13. _____ and Kelly, D. The Rorschach Technique. Yonkers,
N. Y. World Book Company, 1954.

14. Lorr, M. Rating scales and check lists for the evaluation of psychopathology. Psychol. Bull., 1954, 51, 119-127.
15. _____, Rubenstein, E and Jenkins, R. A factor analysis of personality ratings of outpatients in psychotherapy. J. Abnorm. Soc. Psychol., 1953, 48, 511-514.
16. _____, Schaefer, E., Rubenstein, E. and Jenkins, R. An analysis of an outpatient rating scale. J. Clin. Psychol. 1953, 9, 296-299.
17. Osgood, C. E. and Suci, G. J. A measure of relation determined by both mean difference and profile information. Psychol. Bull., 1952, 49, 251-262.
18. Philips, L. and Smith, J. G. Rorschach interpretation: Advanced technique. New York, Grune and Stratton, 1953.
19. Schafer, R. Psychoanalytic interpretation in Rorschach testing. Theory and Application. New York, Grune and Stratton, 1954.
20. Webster, H. A note on profile similarity. Psychol. Bull., 1952, 49, 538-539.

14. Lott, H. Rating scales and check lists for the evaluation of psychopathology. Psychol. Bull., 1934, 31, 119-127.
15. _____, Mundstein, E and Lenthin, A. Factor analysis of personality ratings of outpatients in psychotherapy. J. Abnorm. Soc. Psychol., 1933, 48, 311-316.
16. _____, Schaefer, E., Mundstein, E. and Lenthin, A. An analysis of an outpatient rating scale. J. Clin. Psychol., 1933, 9, 296-299.
17. Osgood, C. E. and Suci, G. V. A measure of relation determined by both mean difference and profile information. Psychol. Bull., 1932, 49, 251-262.
18. Phillips, L. and Smith, J. C. Rorschach interpretation: Advanced techniques. New York: Grune and Stratton, 1932.
19. Schaefer, R. Psychodynamic interpretation in Rorschach testing. Theory and Application. New York, Grune and Stratton, 1932.
20. Webster, H. A note on profile similarity. Psychol. Bull., 1932, 49, 238-239.

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