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THE RELATIONSHIP BETWEEN SUGGESTIBILITY
AND THE RORSCHACH TEST

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CHAPTER I

INTRODUCTION

One of the most popular projective devices in the clinician's armamentarium is the Rorschach test. As a projective device, the Rorschach test differs from the inventory-type of personality tests. The Rorschach technique is a method of studying the total personality, or aspects of the personality in terms of the whole. The individual is presented with a relatively unstructured stimulus-situation and is encouraged to describe his reactions to it. In this manner the individual reveals his personal way of organizing experience.

In order to interpret the psychological patterns, objectivity is sacrificed in an attempt to get at the dynamic aspects of the individual's personality. The psychogram factors of the Rorschach test are dynamically and uniquely united to form a pattern. The obtained picture which represents the individual's personality is determined by physical factors and the psychological "structure" of the individual at the time, depending upon his experiences, emotions, intelligence, and attitudes. Many Rorschach workers feel that a single factor lifted from the context may violate Rorschach's basic principle, that the obtainable picture is a function of the configuration.

For example, Piotrowski¹ insists that a "logical interdependence" exists between the various factors of the Rorschach test, and that no reliable and clear conclusions can be drawn from any single factor. Sargent² holds that it is not the absolute amount of one Rorschach factor that counts but the relationship of the factor to the configuration which gives it significance in the individual protocol. The relationship of the Rorschach factor to the configuration can be studied by introducing changes in the factor. The variation of the factor may give rise to a new configuration. A difference between the Gestalt patterns can be noted, and the differences may be attributed to the variation of the Rorschach factor.

Beck³ suggested that human nature could be passed through a prism and analyzed into component parts. He wrote that, insofar as the individual Rorschach factors are judged with quantitatively established frames of reference, it is possible to make an analysis of these psychological processes independently of the whole personality. The significance of these factors is determined, however, by

1. Zygmunt Piotrowski, The Reliability of Rorschach's Erlebnistypus. Journal of Abnormal and Social Psychology, 1937, 32, 439-445.

2. Helen Sargent, Projective Methods: Their Origins, Theory, and Application in Personality Research. Psychological Bulletin, 1945, 42, 257-293.

3. Samuel J. Beck, Problems of Further Research in the Rorschach Test. American Journal of Orthopsychiatry, 1935, 5, 100-115.

their relationship to the whole personality. According to Beck, the impersonal Rorschach factors which represent psychological processes can and must be subjected to experimentally controlled observation.

The Rorschach test is based on a number of assumptions, many of which have not been experimentally verified. There are two excellent reasons for examining the implications of some of the Rorschach assumptions: (1) since many of the premises have not been tested, the possibility exists that some of them are invalid, and (2) many of the premises cannot be found among the established facts of experimental and research psychology.

Rorschach Validation

The need for validation of the Rorschach test has been emphasized by a large number of Rorschach investigators. Because of the divergence of opinion, the immediate task seems to be a problem of selecting suitable criteria for validating the Rorschach test. Hertz⁴ suggests four methods: (1) direct experimentation, (2) comparison with extensive case studies, (3) comparison with known diagnoses and clinical pictures, and (4) comparison with independent, objective data. Sargent⁵ proposes the following methods: (1) correspondence with other criteria, (2) internal consistency, and (3) predictive success. She thinks that

4. Marguerite R. Hertz, Rorschach: Twenty Years After. Psychological Bulletin, 1942, 49, 529-572.

5. Sargent, op. cit., p. 276.

the latter method is the soundest approach to Rorschach validation.

On the basis of relatively stable and repeatable criteria, an investigation of the Rorschach test can follow one of two general approaches: (1) comparison of Rorschach findings with clinical findings, and (2) the correlation of Rorschach findings with independent measures of mental ability and experimentally controlled behavior criteria. According to Hertz, clinical validation of the Rorschach test seems to have been established.⁶ The number of experimental validation studies has increased, and they will be discussed in a later section.

More specifically, it is possible to differentiate three levels of inference used in interpreting a Rorschach psychogram. Each level requires validation. Schneider⁷ describes each level as follows:

Level I covers the inferences drawn from the raw response record for purposes of arriving at the appropriate scoring symbols and constructing an adequate psychogram.

Level II represents the descriptive statements which can be made by inspection of the psychogram, sequence analysis and analysis of specific verbalization.

Level III includes the comprehensive coherent personality diagnosis which may include the classification of the subject in some nosological group.

6. Marguerite R. Hertz, Validity of the Rorschach Method. American Journal of Orthopsychiatry, 1941, 11, 512-519.

7. Leonard I. Schneider, Rorschach Validation: Some Methodological Aspects. Psychological Bulletin, 1950, 47, 493-507.

This study will concern itself with the second level of inference, namely, that certain Rorschach psychogram factors represent specific psychological processes or variables.

Validity, as used in the present study, will be measured by the degree of concomitant variation between a criterion variable and a Rorschach variable. The criterion variable which is expected to yield a quantitative result which will represent the amount of presence of this variable is called "prestige" suggestibility. The Rorschach psychogram factor which is said to represent this variable is the color-form (CF) response.

The Color Response

In the examination of personality by the Rorschach test, information concerning an important aspect of the personality may be found in the measure of affect by means of the color responses. Rorschach,⁸ Beck,⁹ Bochner and Halpern¹⁰ agree that color serves as means of understanding the individual's feeling experience. Bochner and Halpern feel that color acts as a stimulus to emotion and that the interpretation of the colored parts of the card are assumed to be responses to environmental situations. The color

8. Hermann Rorschach, Psychodiagnostics, p. 98.

9. Samuel J. Beck, Rorschach's Test, 1, p. 113.

10. Ruth Bochner and Florence Halpern, The Clinical Application of the Rorschach Test, p. 42.

responses are usually grouped as follows: Pure color or C, color-form or CF, and form-color or FC. Each of these sub-categories of the color group has special significance.

The pure color response is a direct, uninhibited reaction to emotional stimuli. The individual is characterized as being infantile, impulsive and without intellectual control. The individual is assumed to be at the mercy of his emotions.

The synthesis of color with form is assumed to characterize the dominance of emotion over intelligence. This kind of response is a reaction in which the emotional element dominates but there is a modicum of intellectual control. The color-form responses are considered to be representative of emotional instability, sensitivity, and suggestibility.

The form-color response indicates a reaction in which the intellectual control is dominant with a degree of emotionality, that is, the intellectual factors control the feelings of the person. The individual is said to be allocentric and emotionally mature.

Wittenborn,¹¹ in a factor analysis study of the Rorschach scoring categories, came to the conclusion that the factorial composition of the form-color response category is different

11. J. Richard Wittenborn, A Factorial Analysis of Rorschach Scoring Categories, Journal of Consulting Psychology, 1950, 14, 261-267.

from the factorial composition of the color-form and color response categories. This finding adds some support to Rorschach's assumption that differentiation of color responses into three groups, possibly two groups, may be necessary, and that each group may have special psychological significance.

Suggestibility

Review of the literature treating suggestion and suggestibility shows a divergence of opinion as to the relation of personality variables to suggestibility. Suggestibility has been called a 'unitary' trait and a 'general' factor combined with group factors common to two or more tests. The evidence as to the existence of suggestibility as a unitary trait has been doubtful.¹² Grimes¹³ and others are skeptical with regard to the existence of a general trait of suggestibility. On the bases of 120 correlations, 96.6 per cent of which were below .400, Grimes concluded that there was no substantial evidence found to support the presence of a "G" factor. The question of generality or specificity of suggestibility is, at the present time, left unanswered.

Many investigators believe in the existence of different kinds of suggestibility. Hull¹⁴ distinguishes prestige and

12. H. J. Eysenck, Dimensions of Personality, p. 164.

13. Francis V. Grimes, An Experimental Analysis of the Nature of Suggestibility and its Relation to Other Psychological Factors, Studies in Psychology and Psychiatry, 1948, Vol. VII, No. 4.

14. Clark L. Hull, Hypnosis and Suggestibility, p. 350.

non-prestige suggestion, identifying the former with that measured in his Body-Sway test and the latter with the Binet Progressive Weights and Lines Tests. Britt¹⁵ speaks of direct and indirect, and positive and negative suggestion. Eysenck¹⁶ differentiates three kinds of suggestibility: primary, secondary, and prestige.

In social psychology suggestibility has been identified with the theory of the formation and change of opinion and attitudes. The problem of suggestion has been studied in terms of those factors or conditions which give rise to this phenomenon. According to Britt,¹⁷ suggestion may arise out of social situations where the factors are introduced by another person, or may arise out of environmental situations, or finally, may arise from within oneself. Wegrocki¹⁸ feels that there are other factors besides the conditioned reflex, such as attitude or affective mental set which play an important role in suggestion. Murphy¹⁹ wrote that prestige suggestibility is not necessarily a different

15. Steuart H. Britt, Social Psychology of Modern Life, p. 218.

16. Eysenck, op. cit., p. 168.

17. Britt, op. cit., p. 218.

18. Henry J. Wegrocki, The Effect of Prestige Suggestibility on Emotional Attitudes, Journal of Social Psychology, 1934, 5, 384-394.

19. Gardner Murphy, et al., Experimental Social Psychology, p. 180.

type of suggestion but an increased suggestion due to the effects of the emotional situation upon the ordinary associative processes of the individual. Lewis²⁰ concluded that the function of suggestion was to redefine an ambiguous situation. The old material judged by the subjects appeared in a different context, by introducing a prestige symbol, which demanded a new evaluation.

In general, prestige suggestibility may be conceived as a change in attitude on the part of the subject caused by the introduction of a factor that has prestige value for him. The factor may be a name, symbol, opinion, or an attitude. The presentation of the prestige factor may act upon the subject in three ways: (1) it may bring about an increase in emotional content, (2) it may suggest an affective mental set, or (3) it may require redefining of the old material.

The measure of the influence of the prestige factor is the change in scale value of certain items which is brought about by attaching the factor to the items. The resulting behavioral fact is described as prestige suggestibility.

In this study the second variable, suggestibility, has been recognized by Rorschach and others as being represented by the color-form responses. Rorschach wrote that:

Affective suggestibility is represented in this test by the CF responses; M, FC and C

20. Helen B. Lewis, Studies in the Principles of Judgments and Attitudes: IV. The Operation of Prestige Suggestion. Journal of Social Psychology, 1941, 14, 229-256.

answers may or may not be present; in any case there must be a predominance of CF's, either absolutely or relatively. Egocentric extensive subjects are the most suggestible, and are particularly influenced by emotional suggestions.²¹

The subject with a relatively large number of color-form responses in his protocol is characterized as an individual who can be "sold a bill of goods" with greater ease. Prestige suggestibility, if it is effective, brings about a change in context of the material. The individuals do not simply "change their minds" but re-evaluate the old material.

This study is an attempt to show whether or not a significant relationship exists between prestige suggestibility and the color-form responses of the Rorschach test.

21. Rorschach, op. cit., p. 100.

CHAPTER II

RELATED STUDIES

As was mentioned in the previous section, validation studies may proceed along three levels of inference. Level I deals with the assignment of symbols to a statement which brings together certain aspects of a given response. Level II refers to statements relating psychological processes to Rorschach variables which are said to represent these processes. Level III deals with statements relating variables of the Rorschach psychogram to various nosological groups. Each level requires validation.

The value of any validation study is dependent, to a great extent, upon adequate measures of the variable to be investigated and related. If the selected criterion which is expected to measure an aspect of personality is not valid or reliable, the results of the study will not be very meaningful. A thorough discussion of the related studies is deemed necessary to determine the method of the experimental study, the adequacy of the selected criterion, and the usefulness of the results.

A survey of Rorschach literature shows that related studies, in terms of the second validity level, may be classified into three groups: (1) studies dealing with measures of mental ability, (2) studies dealing with measures

of affective status, and (3) studies dealing with measures of personality factors.

Rorschach and Intelligence

Rorschach¹ listed seven factors as being representative of intelligence: (1) a large percentage of good forms (F+), (2) many movement responses (M), (3) a large number of whole answers (W), (4) good conceptive types; W, W-D, or W-D-Dd, (5) orderly sequence, (6) small percentage of animal answers, and (7) neither too large nor too small percentage of original answers (O). Beck² retained most of these factors but added organization activity (Z) as an indicator of intelligence. The organization activity is, according to Beck, the ability to grasp relations not perceived by other persons of "lower" intellectual capacity.

Hertz³ obtained comparatively high correlations between Rorschach factors and I.Q., as measured by the Otis Self-Administering Intermediate Test. The F plus per cent correlated .460 ($\pm .33$) with I.Q., original answers per cent (O%) correlated .398 ($\pm .032$), Do (oligophrenic detail) per cent $-.420$ ($\pm .38$), and Dr per cent $-.351$ ($\pm .035$). Other correlations were considered to be insignificant.

1. Hermann Rorschach, Psychodiagnostics, p. 57.
2. Samuel J. Beck, Rorschach's Test, II, p. 10.
3. Marguerite R. Hertz, The Rorschach Ink-Blot Test: Historical Summary, Psychological Bulletin, 1935, 32, 33-56.

Kerr⁴ studied the relationship between a number of Rorschach criteria of intelligence and mental ability as measured by the Otis Test. The subjects were a group of different types of twins. The number of subjects was not specified. The I.Q. correlated with the number of wholes, $-.0115$; with movement responses, $-.001$; and original percentage responses $-.00005$. These findings contradict the results of a previous study made by Kerr. In the earlier study the number of whole responses and I.Q. as measured by the Otis Test correlated $.57 (+.045)$. The reasons for this difference in results were not given.

Goldfarb⁵ investigated the relationship between organizational activity (Z) and three independent measures of abstract ability. The three methods of measuring abstract ability were the Block-Design and Similarities subtests of the Wechsler-Bellevue Intelligence Scale, the Weigl Color Form Test, and the Vigotsky Test. The subjects were 30 adolescents, 16 boys and 14 girls. There were three methods of scoring organizational activity: (1) the original directions as formulated by Beck, (2) the same directions as I, but with F plus responses given credit, and (3) directions supplied by Klopfer-Davidson. The results showed no

4. Madeline Kerr, Temperamental Differences in Twins, British Journal of Psychology, 1936, 27, 51-59.

5. William Goldfarb, Organization Activity in the Rorschach Examination, American Journal of Orthopsychiatry, 1945, 15, 525-528.

correlations which differed from each other at the 1 per cent level of significance. However, a difference at the 2 per cent level was obtained between Beck's method of scoring and the Klopfer-Davidson method of scoring when compared with the Vigotsky Test. Goldfarb feels that, on the basis of these results, the Rorschach test is a suitable measure of an individual's capacity to organize his personal experience.

Another study dealing with intellectual factors was made by Wishner.⁶ Each of the 42 subjects was given a Rorschach Test and a Wechsler-Bellevue Intelligence Scale. The results of this study show that the number of responses (R), which appears to involve verbal facility, correlated significantly .801 with the verbal weighted score; the absolute number of whole responses correlated .745 with vocabulary and .634 with the Digit Symbol Test; organizational activity correlated .536 with the full scale and .605 with vocabulary. The F plus per cent and M response were not found to be significantly correlated with mental ability as measured by the Wechsler Intelligence Scale.

Wittenborn⁷ compared 18 Rorschach scoring categories with measures of verbal, spatial, and numerical abilities.

6. Julius Wishner, Rorschach Intellectual Indicators in Neurotics, American Journal of Orthopsychiatry, 1948, 18, 265-279.

7. J. Ross Wittenborn, Certain Rorschach Response Categories and Mental Abilities, Journal of Applied Psychology, 1949, 33, 330-338.

Each of the 68 subjects was given the following tests:

(1) verbal ability as measured by the Yale Reasoning Test, the College Entrance English Essay Test, and the Verbal Part of the College Entrance Scholastic Aptitude Test, (2) numerical ability as measured by the Yale Quantitative Reasoning Test, and the Mathematical Part of the College Entrance Scholastic Aptitude Test, (3) spatial ability as measured by the Yale Spatial Visual Test, and the Yale Mechanical Ingenuity Test. The ten highest and ten lowest people on each test distribution were selected to study the most promising relationships. The results of this study seem to show that there is a general tendency for the number of human responses (H) to be related with the mental ability measures given. There were no significant linear relationships between the measures of mental ability and the usual Rorschach Factors.

Altus and Thompson⁸ attempted to determine the correlates of intelligence in the Group Rorschach. There were two groups. Each of the 128 subjects of the first group was given a Group Rorschach, following Monroe's directions. Each of the 100 students of the second group was given the Group Rorschach twice, at the beginning and at the end of a six week period. The criteria of intelligence were the Altus' Measure of Verbal Aptitude, given to the first group, and the Ohio Psychological Examination, Form 21

8. William D. Altus and Grace M. Thompson, The Rorschach as a Measure of Intelligence, Journal of Consulting Psychology, 1949, 13, 341-347.

given to the second group. The results of this study show that the absolute number of human movement responses correlated .43 with the Measure of Verbal Aptitude and .43 with the Ohio Examination; the absolute number of whole responses correlated .13 with the Measure of Verbal Aptitude and .28 with the Ohio Examination; the relation of the whole to small detail responses correlated .17 with the Measure of Verbal Aptitude and .16 with the Ohio Examination. The other indicators of intelligence did not appear to discriminate. The authors conclude that a large number of M may be indicative of relatively superior intelligence but that the converse of this does not hold true.

Tucker⁹ investigated the relationship between intelligence and the Rorschach movement responses. The subjects of this study were 100 adult neurotic veterans. Each of the subjects was given a Wechsler-Bellevue Intelligence Scale and a Rorschach Test. The results of this investigation show that the number of human movement responses correlated .262 with Full Scale Wechsler I.Q.'s; the number of summed animal and minor movement responses correlated .350 with Full Scale Wechsler's I.Q.'s. The author feels that these correlations are not high enough to predict intelligence in this group.

9. J. E. Tucker, Rorschach Human and Other Movement Responses in Relation to Intelligence, Journal of Consulting Psychology, 1950, 14, 283-286.

Factors Related to Color Responses

In the Rorschach Test, information of the affective status of the individual is obtained from his responses to a number of color and heavily-shaded cards. Levy¹⁰ formulated the hypothesis that presentation of cards believed to be "affectively toned" should show an increase in palmar skin conductance, and that the increase should be the greatest when cards VIII, IX, IV, and VI are presented. The subjects were 50 college students. There was one change in the procedure; the presentation of the cards was modified to determine the effect, if any, position of card in the series might have on the "affective value." The results of this study show no significant differences among the Rorschach cards in so far as their "affective value," as measured by a change in palmar skin conductance, is concerned. Card VIII seems to present the greatest change in conductance, independently of position in the series. Significant individual differences in skin conductance were found in response to the cards, suggesting the possibility of differences in "affective" reactions to the Rorschach test. Levy concludes that the position a card may have in the series seems to exert a considerable effect on change in conductance for the group studied.

10. Jeanne R. Levy, Changes in the Galvanic Skin Response Accompanying the Rorschach Test, Journal of Consulting Psychology, 1950, 14, 128-133.

In a similar investigation Goodman¹¹ concluded that no single card is consistently more effective as an emotional stimulus than any other card. The subjects in this study were 50 white males.

Sappenfield and Buker¹² tested Klopfer's assumption that productivity on the last three cards is a function of responsiveness to color. The specific Sappenfield-Buker hypothesis was: the amount of productivity in response to cards VIII, IX, and X of a completely achromatic series should not differ from the productivity on the other seven cards of this same series. The subjects were 238 students in a General Psychology course. This population was divided into two groups. The Harrower-Erickson Group Rorschach test was administered to group one. After a six week period, an achromatic series of the group Rorschach test was presented to group one. This procedure was reversed for group two. The means of the total number of responses for groups one and two were 16.9 and 17.2 respectively. The magnitudes of the standard deviations of both groups were almost the same, 7.24 and 7.04. The authors felt that, on the basis of the results of this group, the Klopfer hypothesis must be rejected.

11. Howard W. Goodman, An Experimental Investigation of the Affective Value of Color on the Rorschach Test, The American Psychologist, 1950, 5, 321-322.

12. Bert R. Sappenfield and Samuel L. Buker, Validity of the Rorschach 8-9-10 per cent as an Indicator of Responsiveness to Color, Journal of Consulting Psychology, 1949, 13, 268-271.

Dubrovner, Von Lackum and Jost¹³ examined the effect of color on productivity and reaction time in the Rorschach test. In this study, the ink-blot cards were reproduced photographically and mounted on cards of the standard size. Thirty female nurses were divided randomly into two groups. The facsimile and standard Rorschach cards were administered to both groups after an interval averaging two weeks. The results indicated that the "color cards" of the standard series and the facsimile series tended to produce more responses than the "non-color cards" of both series regardless of the presence or absence of color. The difference between average reaction time to the chromatic cards and the average reaction time to the achromatic cards is one of the indices of color shock. The results of this study seem to suggest the possibility that the difference in average reaction time to both series is a function of the difficulty of the cards rather than due solely to the influence of color. The authors reject the hypothesis that only color affects productivity.

Another investigation dealing with color shock was performed by Lazarus.¹⁴ He was interested in color shock as a function of the presence of color in the series. The subjects were 100 high school seniors. Two groups were

13. Raphael J. Dubrovner, William J. Von Lackum, and Hudson Jost, A Study of the Effect of Color on Productivity and Reaction Time in the Rorschach Test, Journal of Clinical Psychology, 1950, 6, 331-336.

14. Richard S. Lazarus, The Influence of Color on the Protocol of the Rorschach Test, The Journal of Abnormal and Social Psychology, 1949, 44, 506-516.

formed. The first group was given the Group Rorschach test, and six weeks later the same group was given a non-color version of the Group Rorschach. The order of presentation was reversed for the second group. Each Rorschach protocol was examined on the basis of 12 of Beck's "color shock" indices. Lazarus concluded that the hypothesis that color influences performance on the Group Rorschach test is not valid. He also rejected the assumption that "shock" is induced by the presence of color on the slides.

Rorschach and Personality Factors

Thornton and Guilford¹⁵ investigated the relationship between Erlebnistypus and scores on the Nebraska Personality Inventory. The subjects of this study were 100 college students. The scores from Form I and Form II of this inventory were correlated with the following Rorschach factors; M, M per cent, C, C per cent, and log M/C. The correlations between these variables were not statistically significant. The authors concluded that the Erlebnistypus scores of the Rorschach test, as measured in this study, bear little or no relation to Introversion-Extroversion scores of the Nebraska Personality Inventory.

Holtzman¹⁶ studied the relationship between the

15. George Thornton and J. P. Guilford, The Reliability and Meaning of Erlebnistypus Scores in Rorschach Test, The Journal of Abnormal and Social Psychology, 1936, 31, 324-330.

16. Wayne H. Holtzman, Validation Studies of the Rorschach Test: Shyness and Gregariousness in the Superior Adult, Journal of Clinical Psychology, 1950, 6, 343-347.

personality traits of shyness and gregariousness and certain Rorschach test patterns in two groups of college students. Group A consisted of 24 men and group B of 22 men. Each individual within the group ranked every member within the group, including himself, with respect to ten traits. The subjects were then ranked according to their summed scores. This validation study tested specific hypotheses regarding the prediction of each trait by objective Rorschach scores. After the relationship between Rorschach psychogram factors and personality traits of group B was analyzed, new hypotheses were formulated and tested by the data of group A. The results of this investigation failed to show any significant relationship between the personality traits of shyness and gregariousness and the Rorschach test patterns.

Holtzman¹⁷ in another similar study, investigated the trait of impulsiveness and its relationship to various Rorschach test patterns. The data for this study were obtained from the same group of subjects mentioned in the previous paragraph. He formulated three hypotheses: (1) there is a relationship between the number of color responses having definite form and those with indefinite form; (2) the degree of impulsiveness manifested by an individual in social situations may be related to the

17. Wayne H. Holtzman, Validation Studies of the Rorschach Test: Impulsiveness in the Superior Adult, Journal of Clinical Psychology, 1950, 6, 34-351.

ratio of $CF+cF+2C : FC+Fc$, and (3) this trait may be revealed in the Rorschach in one or more ways depending upon the personality structure of the individual. For the first hypothesis the validity coefficient was .42 in group A and .07 in group B. For the second hypothesis the validity coefficient was .18 in group A and .03 in group B. Holtzman also selected eight signs of impulsiveness, and each sign was given a weight according to its predictive efficiency. An "impulsiveness" score was determined for each individual by summing the weights of each sign in his protocol. A correlation of .60 between the Rorschach patterns and the criterion data was obtained. He felt that abstracting a single score from the whole Rorschach pattern and then attempting to interpret it is not valid.

Williams¹⁸ studied intellectual performance under optimum and emotionally stressful conditions. The subjects were 25 male students. The experimental procedure was divided into four parts: (1) the initial period, in which the Rorschach test was given, (2) the practice period, in which the Digit Symbol Test was given, (3) the control period, in which the Digit Symbol Test was given under optimum conditions, and (4) the stress period, in which the Digit Symbol Test was given under stressful conditions.

18. Meyer Williams, An Experimental Study of Intellectual Control Under Stress and Associated Rorschach Factors, Journal of Consulting Psychology, 1947, 11, 21-29.

Each of the Rorschach protocols was scored for form quality, form-color, and trends toward good integration (FC) and trends toward poor integration (C). Williams reported high and significant correlations between stress of social pressure and F plus percentage of the total record ($-.606$) and between stress of social pressure with F plus percentage of color cards ($-.724$). The relationship between form-color and performance under stressful conditions was in the expected direction but low and not reliable ($.354$).

Baker and Harris¹⁹ felt that individuals whose behavior varies most should also have Rorschach test scores which reflect such variations in intellectual and emotional behavior. The subjects of this study were 14 male college students. The experimental procedure was: (1) training period, in which the subjects were trained in loudness and speech prolongation, (2) test period, in which the subjects were given a standard word-intelligibility test, and (3) stress period, in which the test was given under stressful conditions. Each of the speaker's performances were analyzed by a number of judges. The Rorschach protocols were scored for F plus percentage and form-color integration. The correlation between variability of speech intensity and form-color integration was in the expected

19. Lawrence M. Baker and Jane S. Harris, The Validation of Rorschach Test Results Against Laboratory Behavior, Journal of Clinical Psychology, 1949, 5, 161-164.

direction (.420) but fell short of significance. Baker and Harris feel that the results of this study seem to indicate that the Rorschach test will predict variation of speech performance under laboratory conditions.

Summary of Results

Studies dealing with the Rorschach correlates of intelligence fail to show consistent results. In general, human movement responses and the absolute number of whole responses appear to be as good indicators of intelligence as any other combination of Rorschach factors. The apparent inconsistency of results may be related to the criterion chosen to measure Rorschach correlates of intelligence. Studies measuring the relationship of Rorschach intellectual factors to the Wechsler-Bellevue Intelligence Scale show positive and significant correlations, although some of these correlations were not high enough to permit prediction of intelligence in the groups tested.

Studies measuring the relative influence of color upon an individual's protocol fail to provide evidence which would support the hypothesis that "shock" is a function of color. There were no significant differences among the Rorschach plates so far as their "affective value" is concerned. Changes in productivity and average reaction time appear to be related to the difficulty of the cards rather than due solely to color. Individual differences were noted in response to the Rorschach test as a whole.

The relationship of the Erlebnistypus scores to typical paper-pencil tests of introversion-extroversion failed to be significant. Other personality traits correlated insignificantly with Rorschach factors. When a number of Rorschach variables were related to behavioral criteria, the results were positive and significant. The data suggest the possibility that the Rorschach test may be capable of predicting variations in speech and intellectual performance under stressful conditions.

CHAPTER III

PROCEDURE AND RESULTS

Procedure

This study is an attempt to determine the relationship between prestige suggestibility and the color-form responses of the Rorschach test. The subjects were 75 students obtained from five different sections of a General Psychology course at the University of Detroit, Detroit, Michigan. The ages ranged from 17 to 31 years with a mean value of 19.6. There were 25 female and 50 male students in this group. Of these 57 were freshmen, 13 were sophomores, 2 were juniors, 2 were seniors, and 1 was unclassified. A control group, consisting of 41 students, was used in this study.

Three suggestibility tests were given over a period of four weeks. Part I of the Personal Audit was given to all sections. Part I of the Economic Attitude Scale was given to five sections. Four sections were given the Economic Attitude Scale and the Personal Audit three weeks apart, whereas the remaining sections were given the two tests four weeks apart. After an interval of at least three weeks, Part II of the Personal Audit and Part II of the Economic Attitude Scale were given to five sections. The sixth section, a control group, was given Part I of the

Personal Audit twice to provide a check on serial effect. All of the students with the exception of the control group were requested to submit to the writer a specimen of their handwriting. Finally, the modified Bernreuter Personality Inventory was administered.

Average scores for each subject were obtained by summing the individual scores on each of the three measures of suggestibility. The ten subjects with the highest average scores and the ten subjects with the lowest average scores were given the Rorschach test. All of the tests were scored by the writer. The Beck method was used to score the color-form responses.

The method of measuring prestige suggestibility is similar in the Personal Audit and the Economic Attitude Scale. In both tests, the subjects are required to judge the value of various statements and opinions taken from quotations of individuals who presumably have prestige value. In the Personal Audit, the term "expert" was used as the prestige symbol. In the Economic Attitude Scale, two groups of authorities and sources were employed. The first group consisted of those individuals who were thought to have "positive" prestige value, namely, former presidents of the United States. The second group consisted of those persons and sources which were thought to have "negative" prestige value, namely, authorities with Communist leanings and Communist newspapers. The statements are scaled according to the value of the opinion expressed. After an

interval of at least three weeks, the judgments were made again, but with the names of the persons and sources attached to the statements. The judgments were scaled again. The shift in scale scores was noted. The scores which represented negative shifts were subtracted from scores which represented positive shifts. It may be possible that the positive shift scores represent prestige suggestibility whereas the negative shift scores represent contrasuggestibility. The final score may be considered an index of suggestibility.

The Personal Audit measures the influence of expert opinion on individual opinion. The statements utilized in the modified Personal Audit were taken from Clifford R. Adams' The Personal Audit.¹ The Personal Audit, as used in this study, consists of 50 items on which the individual taking the test is asked to express his judgment on the basis of his agreement with, indifference to, or disagreement with the statement. Part I and Part II of the Personal Audit were similar in all respects but one; the directions were changed in Part II. The directions of Part I read as follows:

Read each statement, and if you agree that the statement is true, draw a circle around "A".. If you are indifferent to the statement, draw a circle around "N." If you disagree, draw a circle around "D."

1. Clifford R. Adams, The Personal Audit. Science Research Associates, p. 4.

The directions in Part II of the Personal Audit read as follows:

Fifteen experts, each of whom had won success in a different field, were asked to give an opinion of the statements below. At least eight or more of the experts marked each statement below as true. Read each statement, and if you agree with the experts that the statement is true, draw a circle around "A." If you neither agree nor disagree, draw a circle around "N." If you disagree with the experts, draw a circle around "D."

The scale steps were A-N-D. A shift from N to A was considered to have a value of plus 1. A shift from N to D was given a value of minus 1. The highest shift score obtainable was either a plus 2 or minus 2. The minus scores were subtracted from the plus scores, and the final score was considered to be an index of suggestibility.

The Economic Attitude Scale was devised to measure the relative influence of a prestige name on an individual's attitude. The passages used in the modified Economic Attitude Scale were taken from Irving Lorge's Economic Attitude Scale, Sets 1 to 5.² The Economic Attitude Scale, as used in this study, consisted of 30 passages obtained from the writings and speeches of famous persons. In part II of the scale, true names or sources were attached to the passages. The directions of Part I and Part II of the Economic Attitude Scale read as follows:

On the following pages is a group of quotations from the writings and speeches of famous individuals. You are to indicate your agreement or disagreement with the opinion

2. Irving Lorge, Prestige Suggestibility and Attitudes, Journal of Social Psychology, 1936, 7, 386-402.

expressed in each of these statements. You will indicate your agreement or disagreement by circling one of the numbers before each statement by means of the key below:

1. Those statements with which you most completely agree.
2. Those statements with which you agree but not as completely as those you have marked "1."
5. Those statements with which you neither agree nor disagree.
8. Those statements with which you disagree but not as strongly as "9."
9. Those statements with which you most strongly disagree.

The scale steps were 1-2-5-8-9. Each step interval on the scale was given a value of 1. For example, if a shift from 5 to 1 was made, the value of the shift score would be plus 2. The highest shift score obtainable was either plus 4 or minus 4. The final score was attributed to the operation of prestige suggestibility on each subject.

The third measure of prestige suggestibility was the modified Bernreuter Personality Inventory. It consisted of 125 questions. Each subject was requested to submit to the writer a specimen of his handwriting. A copy of the Bernreuter Personality Inventory was prepared for each of these students. The following directions were read to the subjects:

A psychologist analyzed each specimen of handwriting turned in by the students. After a thorough study of each specimen of handwriting, the psychologist gave the subjects a detailed

description of their personality, based on this analysis. If you agree with the psychologist, leave the answer as it is. However, should you disagree place a letter "D" before the number of the question.

The number of agreements to the suggested answers are considered to be an indication of the influence of prestige suggestibility on each subject.

Detailed information as to the description, administration, and interpretation of the Rorschach test may be found in Rorschach's Psychodiagnostics, Beck's Rorschach's Test, and Klopfer's The Rorschach Technique. Briefly, the Rorschach test consists of ten ink-blot, five chromatic and five achromatic cards. Standard instructions are given to the subject. The individual is told to describe everything he perceives on each card. Certain aspects of each response may be classified according to three Rorschach scoring categories: location, determinant, and content. The location scoring category refers to the part of the ink-blot used by the subject in forming his percepts. The determinant scoring category is said to yield information concerning the intellectual and affective status of the subject. The subject's percepts may be influenced by the form of the ink-blot, or by the color found in the ink-blot, etc. The third scoring category provides the content of the responses; that is, the subject's responses may deal with human beings, or animals, etc. The final tabulation of the scoring categories forms a Rorschach pattern which represents the subject's personality. The pattern is, then,

interpreted in terms of Rorschach's basic assumptions.

Results

The means and standard deviations were obtained for the three measures of suggestibility. The results for the experimental group are presented in Table I.

Table I

THE OBTAINED MEANS AND STANDARD DEVIATIONS FOR
THE THREE MEASURES OF SUGGESTIBILITY

	Mean	S. D.
Bernreuter Personality Inventory	95.05	12.37
Personal Audit	2.62	7.03
Economic Attitude Scale	6.53	8.69
Personal Audit, Control Group	.829	5.48

Inspection of Table I reveals that the mean suggestibility score on the Bernreuter Personality Inventory was 95.05 and the standard deviation was 12.37. The number of agreements to the suggested answers ranged from 65 to 118. On the basis of chance alone, there would be 62.5 agreements. A score higher than 73 would occur by chance alone, only 5 times out of 100. Scores higher than 77 would occur by chance alone only once in 100 times. In this study 69 scores were above 77. The mean score on the Personal Audit was 2.62 and the standard deviation was 7.03. The mean score of a control group, which was composed of 41 subjects, was .829 and the standard deviation was 5.48. The t was 1.40;

hence the difference between the experimental and the control group is not statistically significant. It appears that no real influence of suggestibility is operating in this instance other than mere serial effect. The mean score on the Economic Attitude Scale was 6.53 and the standard deviation was 8.69.

Coefficients of correlation between the three measures of suggestibility were obtained by use of the Pearson Product-Moment method. The results are presented in Table II.

Table II

INTERCORRELATIONS BETWEEN THE THREE
SUGGESTIBILITY TESTS
(N=75)

	B.P.I.	P.A.	E.A.S.
B.P.I.	-	.001	-.193
P.A.	.001	-	.066
E.A.S.	-.193	.066	-

An examination of Table II shows that there is a negative, low degree of relationship between the Economic Attitude Scale scores and the Bernreuter Personality Inventory suggestibility scores. The coefficient of minus .193 is statistically insignificant. The correlation of .001 between the Personal Audit scores and the Bernreuter Personality Inventory scores is negligible. The correlation of .066 between the Personal Audit scores and the Economic Attitude Scale scores is also negligible. The conclusion appears to be that there is a negligible relationship between the three measures of suggestibility and that the three tests do not appear to be measuring a common factor.

Table III

A COMPARISON OF THE TEN SUBJECTS WITH THE HIGHEST AVERAGE SCORES AND THE TEN SUBJECTS WITH THE LOWEST AVERAGE SCORES ON THE THREE MEASURES OF SUGGESTIBILITY

Test	Upper Ten		Lower Ten		<u>t</u>
	M	S.D.	M	S.D.	
B.P.I.	107.3	10.64	80.8	11.92	4.98*
P.A.	7.5	7.03	-5.0	5.92	4.08*
E.A.S.	11.6	8.34	-0.5	9.93	2.56#

*Significant beyond the 1% level of confidence

#Significant beyond the 5% level of confidence

The results of Table III reveal that the mean scores on the modified Bernreuter Personality Inventory were 107.3 and 80.8. The standard deviations were 10.64 and 11.92. The t is 4.98 which indicates that the difference between mean scores is significant beyond the 1 per cent level of confidence. The mean scores on the Personal Audit were 7.5 and minus 5.0. The standard deviations were 7.03 and 5.92. The t is 4.08 which indicates that the difference between the two mean scores is significant beyond the 1 per cent level of confidence. The mean scores on the Economic Attitude Scale were 11.6 and -0.5. The standard deviations were 8.34 and 9.93. The t is 2.56 which indicates that the difference between the mean scores is significant beyond the 5 per cent level of confidence. These results indicate that the subtests are consistent with the score for the

total battery, at least in regard to the extremes of the distribution. Analysis of the data found in Table III indicates that the Bernreuter Personality Inventory and the Personal Audit show greater consistency in mean scores than the Economic Attitude Scale. The inferences drawn from Table III appear to be different from those indicated by the intercorrelation results. Hence, there are two contradictory lines of evidence: the one indicating that the three suggestibility tests do not measure the same factor; the other indicating that they do.

Table IV

A COMPARISON OF THE NUMBER OF COLOR-FORM RESPONSES OF THE SUBJECTS WITH THE TEN HIGHEST AVERAGE SUGGESTIBILITY SCORES AND THE TEN LOWEST AVERAGE SUGGESTIBILITY SCORES

	Upper Ten		Lower Ten		
Method	M	S.D.	M	S.D.	<u>t</u>
Standard method	3.2	1.82	1.6	1.03	3.305*
Ratio method	.082	.034	.068	.055	.304
1st three <u>R</u> 's	1.7	.96	1.4	1.12	1.301

*Significant beyond the 1% level of confidence

An analysis of Table IV shows that the mean score for the ten highest subjects was 3.2 color-form responses and the standard deviation was 1.82. The mean score for the ten lowest subjects was 1.6 color-form responses and the standard deviation was 1.03. The t is 3.305 which indicates a difference in mean scores which is significant beyond the 1 per cent level of confidence.

To determine whether or not the number of CF responses was a function of the number of responses (R), the proportion of CF to R was calculated for both groups. The mean score for the upper ten subjects was .082 and the standard deviation was .034. The mean score for the lower ten subjects was .068 and the standard deviation was .055. The t is .304 which is not significant.

In the third method only the first three responses to each card were noted, and the number of CF responses were tabulated for each subject. The mean score for the upper ten subjects was 1.7 and the standard deviation was .96. The mean score for the lower ten subjects was 1.4 and the standard deviation was 1.12. The t is 1.301 which is not significant. The data show that there is a significant difference in mean scores only in regard to the absolute number of color-form responses. The conclusion appears to be that there is a general tendency for prestige suggestibility to be related to the absolute number of color-form responses. However, the value of this finding must be minimized because of three considerations: (1) the Personal Audit test does not appear to measure the influence of prestige suggestibility, (2) the evidence that the three measures of prestige suggestibility are measuring the same factor is not clear, and (3) when the influence of the total number of Rorschach responses is ruled out, the difference between the two groups is not significant.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Rorschach validation may proceed along three levels of inference: (1) setting up symbols which define certain aspects of a response, (2) determining Rorschach representatives of various psychological processes, and (3) obtaining Rorschach sign-factors which would be related to different nosological groups.

This study is concerned with the second level of inference, namely, that certain Rorschach factors represent specific psychological processes. More specifically, this study seeks to determine the relationship between the color-form responses of the Rorschach test and prestige suggestibility.

Color responses are said to yield information regarding the affective status of an individual. The color responses may be subdivided into three groups: pure color, color-form, and form-color. Each of these subgroups has special psychological significance.

Review of the literature fails to reveal consistent evidence for the existence of suggestibility either as a general factor or as a specific trait. However, social psychologists have, tentatively, accepted prestige suggestibility as a fact. A number of tests have been devised which purport to measure this phenomenon. In this

study, three such measures are employed: the modified Bernreuter Personality Inventory, the Personal Audit, and the Economic Attitude Scale.

Related studies were divided into three groups:

- (1) measures of mental ability and the Rorschach test,
- (2) measures of affective status and the Rorschach test, and
- (3) measures of personality traits and the Rorschach test.

When the Rorschach factors of intelligence were compared with other measures of mental ability, the correlations, in general, were low and inconsistent. Hertz obtained a fairly high correlation between the Otis Self-Administering Test and the F plus per cent. Other correlations were considered negligible. Kerr, employing the same test, failed to find meaningful relationships. Wittenborn, using the group Rorschach test, was unable to find significant linear relationships between measures of mental ability and the usual Rorschach factors. He did find, however, a general tendency for the number of human responses to be related with measures given. Wishner obtained significant correlations with the Wechsler-Bellevue Intelligence Scale and certain Rorschach factors. However, the experimental group was highly selective in terms of age, sex, geographic location, etc. In general, the Rorschach factors of intelligence do not apparently correlate significantly and consistently with independent measures of mental ability.

Levy and Goodman fail to find evidence to support the assumption that certain color cards have greater "affective

value" than other cards in the series. Sappenfield and Dubrovner, et. al., reject the hypothesis that only color influences productivity. It was suggested that the complexity of the cards may play an important role in the amount of productivity. Lazarus feels that the assumption that "shock" is induced by color must, also, be rejected.

Thornton and Guilford were unable to detect any significant relationships between Introversion-Extroversion, as measured by the Nebraska Personality Inventory, and the related Rorschach factors. Using a relatively new method to test the personality traits of impulsivity, gregariousness, and shyness, Holtzman failed to find significant correlations. Williams, using behavioral criteria, found high and significant negative correlations between stress of social pressure and the F plus percentage of the total record and of the color cards. Baker, employing somewhat similar criteria, found a low correlation between variability of speech intensity and form-color integration.

In the present study, 75 students were given three measures of suggestibility: the modified Bernreuter Personality Inventory, the Personal Audit, and the Economic Attitude Scale. Ten subjects with the highest average scores and ten subjects with the lowest average scores were selected to test the relationship between prestige suggestibility and the color-form response of the Rorschach test.

Intercorrelation results indicated practically no relationship between the three measures of suggestibility.

It should be noted that other investigations found similar correlations between devices measuring "secondary" suggestibility. When the mean scores of a control group and the experimental group, using the Personal Audit, were compared, the results indicated no real influence of suggestibility.

A comparison of the data of the upper ten subjects and the lower ten subjects on the three measures of suggestibility indicates that the modified Bernreuter Personality Inventory and the Personal Audit may be better measures of suggestibility than the Economic Attitude Scale.

When the same groups were compared with regard to the number of color-form responses, the results showed significant differences between mean scores (t is 3.305). The conclusion indicates that there may be a general relationship between the absolute number of CF responses and prestige suggestibility as measured in this study. However, the value of this finding must be minimized because of three considerations: (1) the results apparently reveal that the Personal Audit exerts no real influence of suggestibility, (2) the intercorrelations between the three measures of suggestibility were negligible. The evidence that the three tests are measuring the same factor appears to be unsatisfactory. And (3) no significant relationship is found when the influence of the total number of responses is ruled out.

In summary, the results from the preceding analysis appear to be inconclusive. The value of a Rorschach

validation study depends upon the selection of adequate measures of the psychological process to be investigated. The data show that the three measures of prestige suggestibility, although generally accepted by some social psychologists, are not intercorrelated, and, therefore, cannot be considered adequate measures of prestige suggestibility. Two possibilities are offered: (1) further Rorschach validation studies must be attempted, and (2) the concept of prestige suggestibility must be reformulated in terms of an operationally defined aspect of personality which would lend itself to quantitative treatment.

BIBLIOGRAPHY

ARTICLES

- Altus, William D., and Thompson, Grace M. The Rorschach as a Measure of Intelligence. Journal of Consulting Psychology, 1949, 13, 341-347.

An investigation to determine if certain Rorschach factors are related to intelligence. The authors conclude that the M response appears to be as valid an indicator of intelligence as any other group of Rorschach factors.

- Baker, Lawrence M., and Harris, Jane S. The Validation of Rorschach Test Results Against Laboratory Behavior. Journal of Clinical Psychology, 1949, 5, 161-164.

The results of this study seem to show that the Rorschach will predict variation of speech performance under stressful conditions.

- Donceel, Joseph F., Alemina, B. S., and Birch, C. M. Influence of Prestige Suggestion on the Answers of a Personality Inventory. Journal of Applied Psychology, 1949, 33, 352-355.

The authors concluded, on the basis of this study, that 19 out of 34 subjects agree with the psychologist's answers to the questions more often than could be explained by chance alone.

- Dubrovner, Raphael J., Von Lackum, William J., and Jost, H. A Study of the Effect of Color on Productivity and Reaction Time in the Rorschach Test. Journal of Clinical Psychology, 1950, 6, 331-336.

The authors reported that the difference in average reaction time appears to be a function of the difficulty of the cards. The results of this study suggest that the hypothesis that only color affects productivity be rejected.

- Goldfarb, William. Organizational Activity in the Rorschach Examination. American Journal of Orthopsychiatry, 1945, 15, 525-528.

The author feels that the Rorschach is an adequate measure of an individual's ability to organize his experiences.

Goodman, Howard W. An Experimental Investigation of the Affective Value of Color on the Rorschach Test. The American Psychologist, 1950, 5, 321-322.

It was found that no one card is consistently a more effective emotional stimulus than any other card. The hypothesis that color is an emotional stimulus was rejected.

Grimes, Francis V. An Experimental Analysis of the Nature of Suggestibility and its Relation to Other Psychological Factors. Studies in Psychology and Psychiatry, Catholic University, 1948, Vol. VII, No. 4.

Correlations were made between prestige and non-prestige suggestibility, as measured by a number of different tests, and mental age, chronological age, sex, I.Q., and scholarship. Results seem to indicate that everyone is suggestible to some extent.

Hertz, Marguerite R. Rorschach: Twenty Years After. Psychological Bulletin, 1942, 39, 529-572.

A review of Rorschach literature dealing with problems of standardization, reliability, and validity of the Rorschach.

Hertz, Marguerite R. The Rorschach Ink-Blot Test: Historical Summary. Psychological Bulletin, 1935, 32, 33-54.

The author presented all of the clinical and experimental studies dealing with the Rorschach. It was concluded that correlation procedures have not produced satisfactory results.

Holtzman, Wayne H. Validation Studies of the Rorschach Test: Impulsiveness in the Superior Adult. Journal of Clinical Psychology, 1950, 6, 348-351.

The correlation between impulsiveness and certain Rorschach factors was in the expected direction but low. The author felt that removing a single factor from the pattern and then attempting to interpret it was invalid.

Holtzman, Wayne H. Validation Studies of the Rorschach Test: Shyness and Gregariousness in the Superior Adult. Journal of Clinical Psychology, 1950, 6, 343-347.

The results of this study failed to show any significant relationship between shyness and gregariousness and certain Rorschach patterns.

Kerr, Madeline. Temperamental Differences in Twins. British Journal of Psychology, 1936, 27, 51-59.

The correlations obtained in this study between the Otis Intelligence Test and Rorschach factors were considered low and insignificant.

Kimble, Gregory A. Social Influence on Rorschach Records. Journal of Abnormal and Social Psychology, 1946, 40, 89-93.

It was pointed out that the Rorschach test appears to be a somewhat unstable device in that the Rorschach pattern is easily changed by environmental factors.

Lazarus, Richard S. The Influence of Color on the Protocol of the Rorschach Test. The Journal of Abnormal and Social Psychology, 1949, 44, 506-516.

From the data studied, the author concluded that color does not influence performance on the Rorschach test. He also rejects the notion that "shock" is induced by color.

Levy, Jeanne R. Changes in the Galvanic Skin Response Accompanying the Rorschach Test. Journal of Consulting Psychology, 1950, 14, 128-133.

It was indicated that there were no significant differences among the cards in so far as their affective value is concerned.

Lewis, Helen B. Studies in the Principles of Judgments and Attitudes: IV. The Operation of "Prestige Suggestion." Journal of Social Psychology, 1941, 14, 229-256.

The author studied the effect of propaganda on individual judgment. She found that prestige suggestion, if it were effective, brought about a change in context.

Lorge, Irving. Prestige, Suggestion, and Attitudes. Journal of Social Psychology, 1936, 7, 386-402.

It was found that when regard for the true authority was higher than for the incorrect authority, the statements were rated positively.

Lurie, Walter A. The Measurement of Prestige and Prestige Suggestibility. Journal of Social Psychology, 1938, 9, 219-225.

The author reviews literature on prestige and prestige suggestibility. He gives a number of suggestions which may be followed in future studies dealing with prestige phenomena.

Moore, Henry T. The Comparative Influence of Majority and Expert Opinion. American Journal of Psychology, 1921, 32, 16-20.

The results indicate that majority and expert opinion bring about reversals of judgment in matters of speech and morals about five times chance.

Piotrowski, Zygmunt. The Reliability of Rorschach's Erlebnistypus. Journal of Abnormal and Social Psychology, 1937, 32, 439-445.

The author feels that the concepts of introversion and extroversion as measured by questionnaires are different from those employed by Rorschach. This difference in meaning will bring changes in the interpretation of results.

Sappenfield, Bert, and Buker, Samuel L. Validity of the Rorschach 8-9-10 per cent as an Indicator of Responsiveness to Color. Journal of Consulting Psychology, 1949, 13, 268-271.

It was suggested that productivity on the last three cards is not the function of responsiveness to color.

Sargent, Helen. Projective Methods: Their Origins, Theory, and Application in Personality Research. Psychological Bulletin, 1945, 42, 257-293.

The author makes an intensive survey of projective methods, including detailed discussion of historical, theoretical, and methodological influences.

Schneider, Leonard I. Rorschach Validation: Some Methodological Aspects. Psychological Bulletin, 1950, 47, 493-508.

The author discusses some of the common errors made in recent validation studies. He offers a number of suggestions one may follow to avoid these errors.

Thornton, George, and Guilford, J. P. The Relationship and Meaning of Erlebnistypus Scores in Rorschach Test. Journal of Abnormal and Social Psychology, 1936, 31, 324-330.

It was concluded that the Erlebnistypus scores were not related to the factors of introversion and extroversion as measured by the Nebraska Personality Inventory.

Tucker, J. E. Rorschach Human and Other Movement Responses in Relation to Intelligence. Journal of Consulting Psychology, 1950, 14, 283-286.

The results indicate that movement responses show a positive and significant relationship to Wechsler Full Scale I.Q.'s.

Wegrocki, Henry J. The Effect of Prestige Suggestibility on Emotional Attitudes. Journal of Social Psychology, 1934, 5, 384-394.

A study of the effect of propaganda on children's emotional attitudes.

Wheeler, David, and Jordan, H. Change of Individual Opinion to Accord with Group Opinion. Journal of Abnormal and Social Psychology, 1929, 24, 203-206.

It was found that group opinion brings about changes in individual opinion to an extent of about three times chance.

Williams, Meyer. An Experimental Study of Intellectual Control Under Stress and Associated Rorschach Factors. Journal of Consulting Psychology, 1947, 11, 21-29.

The correlations between social stress and related Rorschach factors were high and significant.

Wishner, Julius. Rorschach Intellectual Indicators in Neurotics. American Journal of Orthopsychiatry, 1948, 18, 265-279.

The data indicate that the total number of responses correlated significantly with the verbal weighted score of the Wechsler Intelligence Scale. Other factors do not present significant relationships.

Wittenborn, J. Ross. Certain Rorschach Response Categories and Mental Abilities. Journal of Applied Psychology, 1949, 33, 330-338.

The author states that, in general, Rorschach response categories have little value as representatives of mental ability.

Wittenborn, J. Ross. Statistical Tests of Certain Rorschach Assumptions: The Internal Consistency of Scoring Categories. Journal of Consulting Psychology, 1950, 14, 261-267.

The author tested a number of hypotheses developed from basic Rorschach assumptions by means of factor analysis. It was suggested that a hypothetico-deductive approach be used in future Rorschach validation studies.

BOOKS

Beck, Samuel J. Rorschach's Test. I. Basic Processes. II. A Variety of Pictures. New York: Grune and Stratton, 1949.

The two volumes may be considered as expanded versions of Rorschach's Psychodiagnostics. In Volume I Beck gives a complete and detailed description of the location, determinant, and content scoring categories. In Volume II Beck presents 47 complete records and their interpretations.

Bochner, Ruth, and Halpern, Florence. The Clinical Application of the Rorschach Test. New York: Grune and Stratton, 1945.

The authors attempt to show the clinical value of the Rorschach test. The volume contains a rather cursory discussion of the Rorschach scoring categories. There are 40 complete protocols and their interpretations.

Britt, Steuart H. Social Psychology of Modern Life. New York: Rinehart and Company, Inc., 1947, Pp. 204-234.

This chapter deals, in general, with the role of suggestion in social situations. There is a discussion of the definitions, types and studies of suggestion.

Eysenck, H. J. Dimensions of Personality. London: Kegan Paul, Trench, Truber and Company, Ltd., 1947.

Suggestion is considered to be one of the more important aspects of personality, which lends itself to statistical and factor analysis. Primary and secondary suggestibility, as measured by a number of tests, were correlated with other psychological processes. The author concludes that suggestibility is dependent upon the two functions of aptitude and attitude.

Hull, Clark L. Hypnosis and Suggestibility. New York: D. Appleton-Century Company, 1933.

This book is an experimental approach to the problems of hypnosis and suggestibility. Direct suggestibility is identified with the Body-Sway Test. There are a large number of studies dealing with the relationship between direct suggestibility and sex, age, psychotic, and neurotic disorders.

Klopfer, Bruno, and Kelley, D. M. The Rorschach Technique. New York: World Book Company, 1946.

The authors state that this is a manual for a projective method of personality diagnosis. A number of revisions were made to the orthodox Rorschach scoring categories. The volume contains a description of the test, a technique for administering the test, a discussion of interpretation problems, and the use of the Rorschach in clinical diagnosis.

Murphy, G., Murphy, L. B., and Newcomb, T. M. Experimental Social Psychology. New York: Harper and Brothers Publishers, 1947. Pp. 168-180.

A general discussion of the role of suggestibility in social psychology. The authors present a number of studies on suggestibility.

Rorschach, Hermann. Psychodiagnostics. Berne, Switzerland: Verlag Hans Huber, 1942.

This volume contains the original methodological principles underlying Rorschach's theory of personality examination. A description is presented of the method, scoring categories, and value of test in diagnosis.