A Psychometric Approach to the Evaluation of the Rorschach Test

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Joseph Zubin*

It HAS long been recognized by workers in the field of visual perception that attitudinal and ideational factors present in the mind of the subject are sometimes more important in visual perception than the stimulus itself. While this fact was known for a long time to experimental psychologists, it was not until Rorschach came upon the scene that the correlation of these attitudinal factors with clinical categories began to be made. Unfortunately, Rorschach either knowingly or unknowingly ignored the rather rich field of experimental work in visual perception that had grown up before and during his all too brief career. For this reason Rorschach methodology has remained largely outside the psychological fold and has not benefited from either findings in the field of visual perception nor from those in the field of psychometrics. In addition, the test itself involves at least four factors which create difficulties of their own.

First, the Rorschach test, unlike other tests, gives rise to a multiplicity of scores which must be integrated into some pattern or gestalt. Each person is a universe to himself and the sampling of his characteristics which the experiment affords can be treated only by the methods of intra-individual statistics, a method which is still in its infancy. The second source of difficulty inheres in the free and more spontaneous character of the Rorschach experiment. For example, even the number of responses is not fixed and may vary from less than ten to more than eighty. A third difficulty, which is perhaps the severest of all, is the lack of precision in the definition of the various factors into which a given Rorschach response may be resolved, and the arbitrariness that now exists in scoring certain responses. A fourth difficulty is the fact that the interpretation of the various factors is referred to a clinical frame of reference which is itself vague and ill-defined. Such human characteristics as "introversion," "emotionality," "tact" require at least for scientific purposes a much firmer definition than clinical practice now affords. Thus, ill-defined factors are interpreted against ill-defined traits. The very vagueness in the definition of the factors and the corresponding personality characteristics may present the expert with a sufficiently amorphous flux from which he can distill at will his intuitive evaluation more or less independently of the actual responses. That this procedure can operate even in "blind-analyses" is only added testimony to the looseness of our thinking regarding anxiety, introversion, extraversion, tact, creativity, and the other outworn coins on the Rorschach exchange. Who of us can face the Rorschach expert with a denial if he should find signs of

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Just before this paper went to press, Dr. Harry Nelson was kind enough to review it. He pointed out to the author that this paper concerns itself primarily with improving the scoring methods but does not deal with insuring the constancy of attitude in a subject, and from subject to subject. This last matter is of a great consequence to correct interpretation of Rorschach findings and needs more attention than it is now receiving, but it is outside of the bounds of the present paper.
anxiety in our responses? And who would not brighten up agreeably when told that he was creative or exhibited a high degree of efficiency in his creative life? The fact that teachers will often accept a blind analysis of their pupils as "hitting the spot" is probably explainable on similar grounds. There are already several studies with other tests and techniques which indicate the gullibility with which subjects accept personality sketches that have been selected at random as applying perfectly or nearly so to themselves. In order to save Rorschach interpretations from similar doubts it is necessary to tighten up both the scoring methods as well as the personality correlates of the scoring factors by adequately rigorous definitions.

It is the purpose of this paper to formulate a way of obtaining, if possible, more objective methods for attaining the ends which the intuitionists now attempt to attain without the aid of such objective techniques. For even if we were to accept as a fact that experts are able to distill a complete picture of the personality from the responses given to the Rorschach test, it becomes important to determine just how it is done. At the present time there seem to be two schools of Rorschach workers. One school pays little attention to the mechanics of scoring and concentrates directly on the evaluation of the complete performance. The other school concerns itself to a considerable extent with the mechanics of scoring. But the scoring utilized is of a descriptive rather than analytic type. The chief purpose of this type of scoring seems to be to attain a shorthand representation of the actual response. Its chief purpose is to serve as a mnemonic device to recall to the examiner item by item the entire response as given by the subject. It is clear that such concretized scoring can never yield a framework for evaluating general tendencies. A score that yields insight into the underlying tendency in the response must free itself of the concrete elements that are irrelevant. In fact, it should really be impossible to recognize the identity of the response from the score, if the scoring is to represent general factors or traits or constellations. Rorschach workers probably discount the irrelevant concrete situations in each response and attain their generalized interpretation in an intuitive manner. But this does not appear in the recorded response.

Another difficulty that the non-expert meets with, is the free and loose use of analogy between types of Rorschach performances and types of behavior in everyday life. Thus, the person who is rather unsystematic in his succession of responses, seeing wholes, details and rare details in random order in the various cards, is said to exhibit the same type of unmethodical behavior in other situations, especially in life-situations. Persons who tend to see a large number of details in the Rorschach are practical people because they also tend to see the details in situations in life. These analogies are at best hypotheses requiring validation rather than self-evident facts, and although there may be clinical evidence for the validity of these observations, even the most sanguine expert will admit exceptions to the rule and should welcome validation on larger groups which would either substantiate these hypotheses completely or show their limitations.

It must be pointed out at the beginning that our immediate concern is not to evaluate personality by means of the Rorschach, but to present a technique for reducing the mass of data which the Rorschach experiment affords so that it could be treated in the evaluation of personality when—and if—rigorous criteria for personality characteristics become available. Thus, our aim is to study the structure and integration of Rorschach responses, rather than the structure of personality. If such structural patterns of response can be constructed they can also serve as checks on present day hypotheses regarding the personality structure equivalents of Rorschach-response-patterns.
Some of the questions that arise in this connection are listed.

What are the factors that determine a person's response to visually presented and relatively unstructured stimuli, such as ink-blots?

What is the structure or organization of the factors in the persons producing these responses?

How do persons differ from one another with respect to those intra-personal structures?

Are the intra-personal structures of these factors unique or can one find persons that resemble each other closely in these intra-personal structures, in part or in whole?

If like-structured groups are obtained, what else do they have in common?

**FACTORS DETERMINING THE RESPONSE IN VISUAL PERCEPTION**

In order to analyze the complex of factors that influence a given response, it is necessary to examine carefully the behaviour of the subject in the task set by the Rorschach experiment. In this experiment the subject is given a relatively unstructured or semi-structured field of visual stimulation to which he is to respond by telling what it might be. The perceptual process that is initiated by this type of stimulation and the final percept that it gives rise to has been studied in the experimental laboratory for many decades. Work with ink-blots has been included in these studies and they may well serve as the starting point in an experimental investigation of Rorschach responses. Unfortunately many of these studies are tachistoscopic studies which may not apply in full force to studies of the Rorschach. The field which can throw most light on the Rorschach experiment is the field of the psychology of art which deals with such questions as how people look at pictures, how form and contour are perceived and what factors produce the appearance of movement in pictures.

This field, however, is at the present time still in an undeveloped stage and can now contribute little to our understanding of the Rorschach.

Perhaps the most complete simple summary of the experimental work and conclusions in visual perception has been made by Vernon. She indicates that at least for experimental purposes the essential aspects of the perceptual process may be defined as a process that "... undoubtedly originates in the excitation of the sense organs by some part of the external environment; ... the excitation is conveyed by the sensory nerves to the central nervous system; ... where occurs a process of mental elaboration; ... from which issues the percept as we know it."

The percept does not arise full-blown into consciousness, but in a series of graded stages which may be observed introspectively. While these stages sometimes occur so rapidly that they appear to be a unitary unanalyzable process, certain techniques such as tachistoscopic presentation allow the dynamics of the process to be more easily observable, thus revealing the elements that occur most frequently. The following stages have been noted:

**Stage of vague awareness of something present in the visual field.** This stage is hardly ever present in the Rorschach experiment, since there are no mechanical contrivances for exposing the stimulus cards, and the subject is fully aware of the presence of the cards before his eyes.

**Generic object stage.** As the awareness of the presence of something in the visual field becomes more certain, this awareness becomes connected with some kind of object. This object either falls into some general category of objects or bears similarity to it. The identification of the object follows a partial differentiation of the total visual field whereby certain parts stand out more clearly and assume more importance than their surroundings. As this organization becomes more and more detailed and complete, the relevant and important parts rise out of the field, the rest of which fades into the background. It is important, therefore, in considering a Rorschach response to note not only the area in which the response is apparently located, but also the influence of the background in the formation of the given percept.

**Specific object.** These parts and especially their more important details, take on specific characteristics, and are recognized as belonging...

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*It is interesting to note that the primary reason why ink-blots were used in these experimental studies is the fact that they slow up the perceptual process and thus make investigation of the process easier.*
ing to or constituting some specific particular object. This completes the conscious reception of the pattern of visual stimulation.

Understanding of meaning. The analysis of the process whereby meaning is attained is too complex to be treated here. For the purpose of this analysis it is sufficient to say that the element of familiarity, the feeling "I know what you are" is an essential element in the process. In life this process is accompanied by a tendency to the correct response or reaction to the visual stimulus. Under the conditions of the Rorschach experiment the overt response, if it occurs, is the naming of the perceived form or object.

In addition to the four primary stages, several secondary stages are often noted in the perceptual process. Where simple meaningful objects are presented, the perceptual process is so rapid, that some of the stages described previously are either skipped or telescoped. However, when a relatively unstructured field such as an ink-blot is presented some secondary phenomena occur in addition to those previously enumerated.

Visual imagery. It has been reported by Rogers working with ink-blots that this type of material is unusually prone to induce visual imagery. Indeed, whenever thought is baffled, and the perceptual object unfamiliar or difficult to recognize, the observer often resorts to visual imagery.

Kinaesthetic and organic sensation. Rogers reports that kinaesthetic and organic sensations were also frequent accompaniments of perception. They were either of a diffuse type, or localized either in the eye muscles or in the muscular process connected with vocalization. Rogers states that the function of the kinaesthetic sensations was to interpret the perceptions, and "to carry self instructions either to seek meaning or determine the appropriateness of significance." They also seemed to be related to the affective attitudes of the observer to the perceptual situation.

Thus far the stages in perception and the attending processes have been described. It is needless to point out that although the physical properties of the stimulus are not the sole determiners of the response, they still play a considerable role in its determination. The sharp contours, the less sharply defined shading gradients and the colors that may be present are the basic data to which the subject reacts. But to try to analyze the influence of each of these components in isolation would be an atavistic return to atomistic psychology. Instead each of these factors has to be studied in situ and the influence noted on the complex of coexisting factors by such techniques as analysis of variance. Not only what the data are, but in what order and in what manner they are organized in the perceptive process is the important question. Not only what the subject selects into the organization of the percept but what he rejects constitute the important cues for the analysis of his performance.

The essential objective determinant of most percepts is form, structure or configuration. Perception of form does not mean necessarily perception of the objective stimulus form; it is inherent in a mere differentiation of the field into unlike parts. But the perception of a particular part of the field is not determined by the structural arrangement of that part alone; it may also be affected considerably by the structural properties of the surrounding parts of the field. In fact, even highly trained observers when called upon to isolate a given part or aspect, do not always succeed in doing so.

But how does this organization or structuring take place? There are two somewhat opposed tendencies affecting the grouping and the perception of the separate objects in the field. First, there is a tendency toward unification, and objects which group readily into units are easily perceived as grouped. Second, there is a tendency towards structural differentiation in the group; thus objects sufficiently diverse in nature to produce a characteristic structure are easily perceived as standing out from the group. The process of differentiation begins with the figure-ground separation. Wever has described this process as taking place in the following stages:

1

Heterogeneity between figure and ground.

2

A minimum brightness difference between the two which gradually increases; this stage is simultaneous with 1.

\footnote{Rogers, Anna S., An Analytic Study of Visual Perceptions. \textit{Amer. J. Psychol.} (1917) 28:519-577.}

\footnote{Wever, Ernest Glen, Figure and Ground in the Visual Perception of Form. \textit{Amer. J. Psychol.} (1927) 38:194-226.}
A region of separation which appears when 2 has reached a certain magnitude, and eventually narrows down to become a contour.

Shape, however, appears before the contour is definite. For a good figure-ground experience, certain further stages may occur; of those listed below, 5 and 6 are essential.

Protrusion of the figure out and away from the ground.

Definite depth localization of the figure.

Surface texture of the figure: filmy texture of the ground.

Halo around the figure: a simultaneous contrast effect. The time required for the figure to become perceptible varies with the complexity of the stimulus.

Some objective conditions of the stimulus will condition the emergence of a particular part of the field as figure. If one area encloses a smaller area, the enclosed area is more likely to appear as the figure. Color, brightness, symmetry and spatial position also tend to enhance the ‘figure’ qualities of a given area.

Just how a given field will be organized will depend on the “goodness” or stability of the organization. Koffka has divided up the forces that create a given configuration into “internal” and the “external.” The external forces are the influences excited by the conditions of retinal stimulation; they tend to make the perceived configuration conform as closely as possible to the pattern of retinal stimulation. The internal forces favor configurations of the greatest simplicity and unification, such as the simple primary shapes of the circle and the triangle. The nature of the resulting configuration depends upon the resultant of these two types of forces. This ever present conflict between the retinal image and the tendency to good configuration leads to such well known phenomena as simplification, closure inclusiveness, and constancy of configuration.

There are means available for testing whether a given portion of the field is figure or ground: first, the impenetrability of the surface color of the figure as opposed to the ready penetrability of the ground; second, the color constancy of the figure; and third, shadows are more readily seen on the ground and so forth.

Thus, experimentally the figure and ground can be readily discerned by their properties. The implications of these facts for distinguishing between the different types of locales in Rorschach scores is obvious.

One of the elements that underlie all types of organization is the spatial framework, “the general framework in which every single part of our phenomenal world receives its place.” The parts of the field that assume the function of framework will be seen as horizontal or vertical, regardless of whether their retinal images are so or not. It is of course likely that persons in whom the spatial framework is disturbed, as might be the case in some psychotic conditions, will differ from normals in what they perceive.

One of the characteristic phenomena discussed by Gestaltists is that of apparent movement. The implications of the phi phenomenon and its correlates to the movement response in the Rorschach have never been investigated, but such investigations appear to be very promising.

The relative preference of children for color as contrasted with form in experimental situations, and the age variations in the preference, have been studied extensively. These studies seem to indicate that color preference seems to be earlier if not more basic. The implication of this fact for children’s Rorschach responses ought to be thoroughly investigated.

The above data are based on group experiments and usually conclude with generalizations regarding average tendencies. The individual differences in these tendencies have not been studied very carefully in the laboratory. It is in fact these personal differences that form the
basis for Rorschach typology, for if there were no such consistent differences, the Rorschach results for all persons would be alike. These differences may be regarded as results of certain attitudes present in the personality. These attitudes may be constant for each person or may vary from time to time. They may be classified into three groups: general attitudes; attention; set and Aufgabe; and, familiarity. The general attitude is a function not so much of the particular experimental task, as of the observer’s characteristic reaction to any experimental situation. Such attitudes usually appear to have some temperamental basis, but may be modified by intellectual factors, such as interests. Examples of the first class of attitudes, introduced into the experimental situation from without, are the synthetic and analytic attitudes. They are often reported in experimental situations, and by some experimenters have been evolved into perceptual and temperamental “types,” that is to say, general types of behavior habitually adopted as a function of some innate temperamental basis. The adoption of the synthetic attitudes leads the observer to see the perceptual field as an integrated whole, without much regard for detail; while the observer with an analytic attitude concentrates on isolated or unrelated detail, and does not see the pattern or configuration of the field as a whole. Other attitudes are those of confidence and caution, and the critical or evaluative attitude.

The second type of attitudinal factor is that of attention. “It seems to consist essentially in focusing awareness upon certain sensory processes aroused by the stimulus field, or upon certain motor responses to these. Moreover, the awareness is usually characterized by its persistence and duration, if not of the actual sensory processes, then of the imagery set up by them. In addition, there is frequently some inhibition of other irrelevant sensory and motor processes.”

It is thus natural that to perceive clearly and accurately, the observer who voluntarily adopts the attentional attitude tries to narrow his range of awareness as far as possible, and to resist attempts to distribute or divide it. To this end, numerous methods are adopted of grouping and combination of the diverse stimulus objects appearing in the perceptual field. This tendency seems to be fundamental and far-reaching. It appears again and again in every type of cognitive process, and is very prominent in the perceptual field. It is this tendency that gives rise to the organization of the percept in in-bolts to complete whole response or organized large detailed responses.

If, owing to the complexity or incongruity of the various stimuli, this combination is impossible, the attentional attitude will usually lead to a successive focusing of awareness upon different parts or aspects of the field, each of which can separately be satisfactorily dealt with, assimilated and comprehended. Why certain persons succeed in organizing the visual field while others do not must, of course, be relegated to personal differences in these attitudinal factors.

On certain occasions, however, the observer may voluntarily seek to widen his range of awareness to include simultaneously two or more stimulus fields so different and unrelated, that they cannot be combined or unified in any way. This process has been called the dissociation or division of attention, and appears to consist largely of a rhythmical oscillation in the direction of awareness, which alternates rapidly between the different fields. This very rapid rhythmical oscillation of awareness, which can only take place with the most powerful attentional reinforcement, must in no way be confused with the much slower alternation, called “spontaneous fluctuation of attention,” for it was shown that the latter occurred in the absence of attentional reinforcement, and indeed did not appear to have any close relationship to attention.

The third attitudinal factors are set and Aufgabe. It is clear from the reports of experimenters that the mental set or Aufgabe influence considerably the percept. The instructions of the experimenter are understood in varying degrees by different persons and in addition spontaneously adopted sets tend to influence the resulting percepts. This is perhaps the
most neglected field of Rorschach investigation, although Rorschach himself did some preliminary experimentation with changes in the directions.

The studies in the influence of familiarity on the perceptual process are difficult to apply to the case of ink-blot perception, since most of these studies dealt with meaningful material. It is, however, clear that familiarity to a certain extent conditions the final response.

To summarize, the typology on which Rorschach scoring and interpretation is based, is made possible by the fact that visual perception is not photographic. It is more like painting in so far as the elements in the retinal image of the artist are selected along lines determined by attitudes and previous experience. At the present time the nature of personal differences in visual perception of the same stimulus area have not been experimentally established. Rorschach’s intuitive evaluation of these differences as well as those of other typologists may very well serve as working hypothesis for understanding and interpreting these differences.

**FACTORS DETERMINING THE RORSCHACH RESPONSES**

Starting with the premise that each response to the ink-blots may be considered to be the resultant of many factors, it becomes necessary to evaluate the importance of each factor in the ‘individual’ responses. Rorschach’s method was to determine the chief factor and regard the response, at least in his formal scoring, as the result of this factor alone. Wherever two factors such as color and form contributed significantly to the determination of the responses, both factors were recorded. The factors that were not of primary importance in producing the response were either ignored or kept in mind by the examiner until the time for interpretation came. Some workers today tabulate the additional factors but take them into consideration only in an ancillary rather than a formal manner, that is, they use them or discard them depending upon the hypothesis they select for describing a given personality.

The decision as to which determinant is the most important is a psychometric judgment not different in nature from judgments made in other experiments. It is here then that psychometrics makes the first contact with Rorschach problems. If we could define rigorously the various possible factors that might operate in the production of a given response and could also establish scales for gauging the importance of each factor in a given situation, we could remove much of the lack of objectivity that now surrounds Rorschach scoring and interpretation. Even after rigorous rating scales are developed the scoring will still depend to some extent on the personality of the examiner as Rorschach himself pointed out in the discussion of movement responses. However, if samples of each step in the rating scale are provided similar to samples that handwriting scales afford for each level of handwriting ability, the rating of the Rorschach factors could be made as objective as one desired. It is our purpose to prepare rating scales for evaluating each of the Rorschach factors separately with regard to two major aspects: its importance in determining the response; and, the quality of the response which it determines. A detailed procedure will be described later.

The end result of the analysis will be a pattern representation for each response of all the factors that enter into its determination, each factor being weighed by its importance and quality. There will be as many patterns as responses, and it will be necessary to group these patterns in some way so as to summarize them in a succinct manner. Methods for making such groupings have been recently suggested elsewhere. However, for group purposes, each factor could be analyzed separately. Thus, one could compare the median weight of the form factor $F$ in a group of retarded and a contrasted group of normal children.

Perhaps the most important question that faces the examiner is how to determine the relative importance of the vari-
ous Rorschach factors in a given response. It would seem that the provision of a rating scale such as the one contemplated should aid considerably in deciding on the relative importance of the various factors. While the ratings would be subject to the usual errors that inhere in all rating techniques, the reliability of the ratings could be increased to any standard of accuracy that might be set up as a criterion.

TABLE A

FACTORS IN RORSCHACH RESPONSES

Classification of Responses
Types of Locale
Whole—\( W \) Details—\( D \) Rare Details—\( Dr \)
Organization
Inclusiveness
Types of Determinants
Form—\( F \) Shading—\( Sh \) Color—\( C \)
Position—\( Po \)
Types of Interpretation of Determinants
Static Dynamic—\( Dy \) Dimensional Structure—\( St \)
Surface Appearance—\( Su \)
Types of Content
Animate—Inanimate—\( An \) Pictorial Presentation—\( Pe \)
Nature Phenomena—\( N \) Man Made Object—\( Obj \)
Abstract—Concrete—\( Ab \)
Popularity Versus Originality
Psychological Characteristics of Response
Reaction Time—\( RT \)
Contamination—Incongruity—\( Cot \)
Confabulation—\( Cof \)
Perseveration—\( Pe \)
Mood—\( Mo \)
Rating of Subject’s Attitude Toward Response
Self-Estimate of Adequacy of Response—\( S.E. \)
Attitude Toward Reality of Response—\( R.R. \)
Rating on Point of View of Subjects—\( R.P. \)
General Observations on Subject’s Performance
The Succession—\( Suc \)
Turning and Handling of Cards—\( T.C. \)
Subject’s Readiness to Respond—\( S.R.R. \)
Self-Reference—\( S.R. \)

In making such a rating scale for the importance of a factor, an important decision must first be made. Should the rating be based on the relative importance of the factors or on their absolute importance? If the relative importance is sufficient, the factors can be ranked in the order of their importance for each response. However, if the absolute importance of the factors is required, certain criteria for gauging the importance of each factor must be set up. The relative ranks will yield an index of the relative importance of each factor, but this index will not be comparable from response to response. The absolute rating will be more comparable from response to response and therefore was selected as the basis for rating. The factors that will be investigated are shown in Table A.

It will be noted that the ratings of a given response are subdivided for convenience into four major divisions: classification; psychological characteristics; sub-

ject’s attitude; and, a miscellaneous category of ratings. The first category, that of classification of response, corresponds to the formal Rorschach scoring. The other three types of ratings are usually obtained by the Rorschach expert in the form of crude observations but they are rarely written down or organized into scales. They merely serve as the memory background for his evaluation. Instead of depending upon the hit or miss method of the intuitive Rorschach expert it is proposed to write down all of these ratings in organized scales at the time the record
is scored. Each group of ratings will now be discussed in turn.

**Classification of Responses**

The orthodox Rorschach scoring consists of three elements: locale; determinant; and content.

**Locale**

For the purposes of this paper the term locale has been defined, as that area of the blot which the subject indicates—either by describing, pointing, or drawing—as the stimulus area which gave rise to the response. It may vary from the entire blot to a very small detail.

The locale of the response is referred to by Rorschach as the "modus in sizing up the ink-blots." Is the picture sized up and interpreted as a whole or in parts, and in which parts? By determinants, Rorschach designates the factors that have determined the response. Was the response determined by the shape of the locale alone or did the color of the locale or a sensation of movement participate in the determination? The content refers to the identity of the seen object or person. It is necessary to examine each of these concepts in turn and to indicate the corresponding concepts, if they exist, in experimental psychology.

The locale of the percept is very closely related to the figure as opposed to the ground in visual perception. That which emerges from the blot as the percept is the figure. The rest of the ink-blot, in part or in whole is perforce the ground. Thus, we might define a whole response, $W$, as one in which the white space that bounds the sides of the ink-blot is the ground and the rest of the ink-blot is the figure. A detail response, $D$, would then be a response in which the ground contains some of the ink-blot as well as the surrounding white space.

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8 The value of writing down these impressions as they occur has been immortalized in the ancient Chinese proverb: "The palest ink is better than the strongest memory."

9 Even when only a small detail forms the basis of the response, it is doubtful whether the rest of the card did not contribute in some way to the percept located principally in the detail. This matter is dealt with later.

**Types of Locale**

The experience of Rorschach workers has indicated that in general the locale can be tabulated under the following five headings: Whole response $W$; large normal details $D$; small normal details $d$; rare details $R$—either very small or unusual parts of the blot; white space $S$. Several systems have been developed for classifying responses in accordance with these locales and of these systems the one proposed by Beck is followed. For a given response, the importance of each of the four elements that Beck utilizes—$W$, $D$, $Dr$, and $S$—is rated on the basis of the following rating scale.

**Importance of Locale**

In the usual approach to the Rorschach the experimenter selects the one locale out of all the five possible locales which he considers as the stimulus area for the response. This is by definition the most important locale. When one attempts to determine the relative importance of the subsidiary locales, the question arises how they are to be rated. At the present time, in the absence of experimental work, it is necessary to establish some empirical rules for gauging their importance. One source of evidence is the original verbal response of the subject. Any items mentioned in the original response are probably more important than those mentioned only in the inquiry, and those mentioned without prodding in the inquiry are probably more important than those that required prodding. This is only a general rule, and may not work in all cases. Only experimental evidence from tachistoscopic exposures and other types of experiments can answer this question. Another basis for judgment is that of inference, since some elements of the stimulus are essential for evoking the response. These two types of considerations are the only bases we now have for estimating.


10 The primary reason for selecting Beck's system is that he has tabulated some 4000 responses with their scoring.
the relative importance of the subsidiary locales.

The importance of each type of locale is rated on a five-point scale ranging from 0 to 4. The step values are as follows:

0

Of no importance whatsoever. Totally ignored.

1

Of some minor importance but verbal evidence of its importance given neither in inquiry nor in original response—acted as a sort of background in a neutral way.

2

Of a secondary—as opposed to primary importance—as evidenced by inquiry or inferred directly from original response: perceptibly helped in the determination.

3

A most important locale in determining the response as evidenced by mention in original response.

4

The most important locale.

Quality of Locale

The quality ratings indicate the ability that the subject exhibits in structuring the vague material that the ink-blots presents.

In this paper a modification of the Z score of Beck is used as an estimate of the quality of the locale. As a result of a study of the modes of organization, Beck formulated the following types of organization:

\[ w \text{ whole.} \]
\[ j \text{ adjacent details.} \]
\[ t \text{ distant details, that is, separated either by filled material or by white space.} \]
\[ s \text{ filled material and white spaces.} \]
\[ wj \text{ simultaneous organization involving both} w \text{ and} j. \]
\[ wt \text{ simultaneous organization involving both} w \text{ and} t. \]

Beck\(^{12}\) has made a statistical study of the difficulty of each type of organization to which he applied the symbol Z. This scale is weighed for the relative organizational difficulties that each card presents and ranges in value from 1.0 to 6.5. For the purposes of our scale we have reduced Beck's values to scores running from 0 to 4, in order to make them conform to the scales used for scoring the other factors in the responses. Zero is reserved for those responses using only individual details. Beck lists the Z value for each of his 4,000 scored responses, and this reservoir of scores can be used to obtain our transformed values. The transformed values are shown in Table B.

**TABLE B**

**QUALITY SCALE FOR LOCALE CORRESPONDING TO BECK'S Z SCORE**

<table>
<thead>
<tr>
<th>Cards</th>
<th>Whole</th>
<th>Adjacent</th>
<th>Distant</th>
<th>Black with White</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>(.)</td>
</tr>
<tr>
<td>V</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>(.)</td>
</tr>
<tr>
<td>VI</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>(.)</td>
</tr>
<tr>
<td>VII</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>(.)</td>
</tr>
<tr>
<td>VIII</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>(.)</td>
</tr>
<tr>
<td>IX</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>(.)</td>
</tr>
<tr>
<td>X</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>(.)</td>
</tr>
</tbody>
</table>

In order to conserve space in the records, the quality scale—organization—for locale is recorded as an exponent to the importance scale for the chief locale, that is, for the locale with a rating of 4. In subsequent scales for other factors the quality scale is similarly recorded as an exponent.

Another element to be considered in the locale is the tendency to select out certain portions of the ink-blots for interpretation, excluding nearby portions. Thus, in *card III*, the red spots are often excluded. But, sometimes large normal details and even rare detail responses do not include the entire area in which they are located. The

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\(^{13}\) Beck, D\(_1\), D\(_2\), D\(_3\), and D\(_4\) refer to certain specified areas in cards 1, 2, 6, and 10 respectively. These are described by Beck; reference footnote 13.
following scale gives the ratings based on the degree of inclusiveness of a response for the locale chosen as primary. Since edge details represent a complete cutting off of the blot and a use of the contour only, they are given the lowest rating on inclusiveness. Next in rank is the inside detail and the highest rating is given to responses that utilize the entire area in which the primary response is located.

**INCLUSIVENESS WITHIN LOCALE CHOSEN AS PRIMARY**

0
Only edge detail used—rest cut off or background.

1
Only inside detail used—rest cut off or background.

2
Some selection, a major detail cut off—like a white space, for example.

3
Some selection but only a minor detail cut off.

4
Entire area used, nothing cut off.

**DETERMINANTS**

Rorschach utilized only three determinants in his original system: Form, Movement, and Color. Subsequently two new determinants were introduced: Shading Sh and Position Po.

Artists have for a long time made similar analyses of the elements underlying their productions. One of the most simple analyses is that of Dow, which has served as the basis for the construction of the McAdory Art Test and consequently has the advantage of having been studied previously. Dow divides the elements underlying artistic productions into three parts: line, notan, and color. He states: "The term line refers to boundaries of shapes and the interrelations of lines and spaces. ... The term notan, a Japanese word meaning "dark light," refers to the quantity of light reflected, or the massing of tones of different values. ... The term color refers to quality of light." It is readily seen that line corresponds to Rorschach's form, notan to Binder's *Helddunkel* and of course color is so designated by both Dow and Rorschach.

An analysis of these determinants indicates that movement does not belong in the same category with the rest. If we define the term determinant operationally, as some objective quality of the ink-blot stimulus that determined the response, it becomes clear that movement as such is not a determinant, but an interpretation of a determinant. Form, Color, Shading, and even Position have some visually perceived correlate in the blot. As for movement, however, it is initiated by some visual cue but it is an inner felt experience rather than a determinant in the above sense. Rorschach fully realized this to be the case when he indicated that form is really the basis for the movement category. For this reason, movement will not be counted as a determinant, but will instead be regarded as an interpretation of the determinant. The following steps are suggested for rating the determinants:

X
Determinant impossible—color in uncolored cards.

0
Determinant possibly present but not used at all.

1
Determinant probably used—as a sort of background factor, but verbalized in neither the original response nor the inquiry.

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19 To be truly operationally defined, it is necessary to define "objective quality of the ink-blot" as a quality which is agreed as being present in the blot by a majority—or some other proportion—of a random sample of persons. Without such empirical proof of the presence of a given quality, it would be difficult to proceed.

20 The form or contour of the response is usually produced by a sharp difference in the color—including black and gray—of the stimulus. From this point of view the difference between form and shading may be quantitative rather than qualitative, since shading is also the product of differences in color when the gradients are not so sharp.

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2 Dow, Arthur Wesley, *Composition; Garden City, Doubleday, Doran, 1938 (3 and 128 pp.).

23 McAdory, Margaret, *McAdory Art Test; New York, Bureau of Publications, Teachers College, Columbia University, 1929."

Reference footnote 15, p. 7.
Determinant of secondary importance as contrasted with primary importance.

Determam11 of considerable importance.

Primary determinant.

This rating is given when the subject refuses to recognize determinant even after it is pointed out.

The quality of the form response can be gauged in the following four steps:

0
   Very hazy undefined form that does not correspond to the contour of the stimulus—corresponds to F—.

1
   Ill defined form with some degree of correspondence to the stimulus.

2
   Fair degree of correspondence to stimulus—average F.

3
   Good degree of correspondence to stimulus.

4
   Excellent correspondence—F+.

Here again we have no objective criterion for measuring the goodness of the correspondence. However, it is reasonably safe to say that few if any pairs of competent judges will differ by more than one or two points in the middle of the scale, and by much less at the extremes of the scale.

The quality of the color, shading and position response can be gauged on the same scale of degree of correspondence between the stimulus and the response.

Quality of Color Response

x

Color naming or enumeration.

0

No correspondence between color of stimulus area and natural color of perceived object.

1

Color used as vague background but its actual identity—whether red and blue, for example—is of no significance.

2

Color used as a conventional differentiation method—color on maps and slides, for example.

3

Color corresponds to natural color \textsuperscript{21} of perceived object fairly well but not perfectly.

4

Complete congruence between color of stimulus and color of perceived object.

INTERPRETATION OF DETERMINANTS

Each of the determinants may be interpreted in various ways, ranging from an interpretation as a "felt-movement" to that of a static three dimensional figure. An analysis of the experience of Rorschach experts indicates that there are at least 3 major categories into which the various interpretations may be classified.

The first one is the static-dynamic category which replaces the \( M \) and \( FM \), symbols now in general use and the new \( m \) symbol used by some workers. The second category is that of dimensional structure which replaces such symbols as \( Y \), \( FK \), and \( k \). The third is the category of surface appearance which replaces the present symbols \( c \) and \( C' \), for examples.

The importance of each interpretation category can be rated on the following scale:

0

Not important in interpretation.

1

In the background but explicitly stated neither in original response nor in inquiry.

2

Of secondary importance as evidenced by inquiry or inferred directly from original response. Perceptibly helped in interpreting determinant.

3

A most important element in interpretation as evidenced by mention in original response.

\textsuperscript{21} Daylight color of the object for an average observer.
The most important category in the interpretation.

The various possible subdivisions under each category will now be enumerated.

Static-Dynamic Category

The dynamic aspects of the response had been designated by Rorschach as $M$, which was limited to human or human-like movement. Since then, the movement response has been subdivided into human movement, $M$, animal movement, $FM$, and inanimate movement, $m$. This type of subdivision probably resulted as a concession to Rorschach's refusal to accept anything but human or human-like movement as a real movement response. As a consequence, the content score in an $M$ response for example became supernumerary. A response which is now scored as $WMH$ seems redundant, for $M$ by itself designates human movement and the $H$ in the content category is supernumerary. A response that is now scored as $WMFMA$ is similarly redundant and the same holds true for $WMmObj$. This is perhaps the reason why content per se was never accorded as important a place as the other factors in the evaluation of the Rorschach responses. All the importance was abstracted from it and given to the determinant. In order to remove the confusion between determinant and content in scoring responses involving movement, the determinant is designated as $F$, and in addition the interpretation symbol as well as the content symbol is given.

The static-dynamic category can be subdivided into the following steps:²²

0 Total absence of movement.

a Static—standing, sitting, spreading—as wings of animals without any apparent movement.

b Being moved. Being moved by external force, being dropped, or revolved, are examples.

c Tension—Bending, rising, actively outstretched, poised, or some other dynamic pose, smiling or other expression.

d Shaking hands, playing patty cake, talking, gossiping, stirring something, dancing and other dynamic activities.

A difficulty scale based on frequency of occurrences could also be utilized for these factors, as soon as it becomes available. The beginnings of such a scale can be found in Klopfer's work.²³

Dimensional Structure

There are three dimensions in which the percept can be perceived. In addition, it is possible to see a three dimensional object projected into two dimensions and possibly a two dimensional object projected into one dimension. The tentative designations of the sub-categories are as follows:

a Uni-dimensional object—string seen in one dimension and spire of church, for examples.

b Two dimensional objects—shadows and clouds, for examples.

c Three dimensional scene giving vista effect.

d Three dimensional objects—without vista.

e Three dimensional objects seen in two dimensions—x-ray.

Surface Appearance

The surface appearance can vary from complete undifferentiated diffusion as in clouds to such surface texture as wool, and to surface color perceived in an achromatic stimulus. These may be listed as follows:

a Diffusion—clouds, smoke, snow.

b Transparent surface.

c Surface color—achromatic.

²² It should be noted that these steps do not necessarily represent a continuum.

²³ An unpublished discussion.
d
Surface color—chromatic interpretations of achromatic stimulus.

e
Surface texture—soft, woolly, hairy.

f
Surface texture—hard, brittle.

CONTENT OF PERCEPT

The content of the percept may be classified into the following five categories: animate-inanimate; pictorial presentation; nature phenomena; man-made objects; and abstract-concrete. The relative importance of each of these categories can be rated on the same scale as the determinants and interpretation categories. In addition, the special sub-type under each category may be designated as exponents in the same manner as the quality scales that were previously described. There are, therefore, two parts to the rating of content: importance and quality.

1. Importance.
The importance of the content can be rated in the same manner as the importance of the interpretation categories—see 3.

2. Quality of Type.\textsuperscript{24}
Animate-inanimate—\textit{An}.
   a. Human.
   b. Animal.
   c. Plant.
   d. Dead—human or animal.
   e. Anatomical parts or structures.
   f. Inanimate objects.
Pictorial Presentation—\textit{Pi}.
   a. Charts.
   b. X-rays.
   c. Maps.
   d. Painted scenes or drawing.
Nature Phenomena—\textit{N}.
   a. Clouds.
   b. Smoke.
   c. Fire.
   d. Landscape.
   e. Explosions.
Man-made Objects—\textit{Ob}
   a. Tools.
   b. Clothing and furniture.
   c. Art.
   d. Architecture.
   e. Miscellaneous.

Abstract-Concrete—\textit{Ab}.
   a. Abstract symbolism.
   b. Abstract description.
   c. Enumeration of objects or colors.

It must be pointed out at this time that in separating out the determinant elements from the content elements and thus making the scoring system more rational, there was no intention to deny the validity of such combinations as \textit{FC} or \textit{CF}, for instance, as interpretable units. The \textit{FC} radical can still be regarded as an indicator of the quality that it is alleged to represent, but instead of calling it \textit{FC}, we designate it as \textit{F}_4 \textit{C}_3 and correspondingly, \textit{CF}, is designated \textit{F}_3 \textit{C}_4. The freedom in rating which this new system affords ought to compensate for the greater visual complexity it presents. Furthermore, new combinations which now are not yet apparent may emerge from an analysis of contrasted criterion groups.

POPULARITY VERSUS ORIGINALITY

Each of the responses can be rated on a popularity-originality continuum on the basis of the rating shown in the following scale.

\textit{Ratings for Popularity—Originality}

\begin{tabular}{ll}
0 & \\
1 & Popular—Klopfer's ten popular responses. \\
2 & Other popular.
3 & Semi-popular—popular with original elements.
4 & Semi-original—original with popular elements.
5 & Original.
\end{tabular}

The 10 most popular responses according to Klopfer\textsuperscript{25} are given the lowest rating for originality and the list of these 10 is shown in Table E.

\textsuperscript{24} Prime used for designating detail. Thus \textit{An-a'} = detail of a human being—\textit{Hd}, in the older system of scoring.

\textsuperscript{25} Klopfer, Bruno, and Others, The Technique of Rorschach Scoring and Tabulation. \textit{Rorschach Rec. Exchange} (1940) 4:75-83.

Psychological Characteristics of the Responses

In addition to the categories into which the Rorschach responses may be distributed, several psychological factors have been found to characterize certain responses. These will now be presented and ratings for the presence of each suggested.

TABLE E
Klopper's Popular Responses

Card
I. Winged creature, either bat, butterfly, moth, eagle.
II. Any kind of animal or part of animals in the black spots. Clowns—frequent among superior subjects. Not universal.
III. Two figures—doing something. Center portion—hair, ribbon, butterfly, are examples.
IV. No popular response.
V. Winged animal—top rank.
VI. Animal skin—texture is used.
VII. No popular response.
VIII. Animals in motion.
IX. No popular response.
X. Large details:
   a. spiders, for example—outside blue.
   b. green elongated creatures.
   c. rabbit's or goat's head.

REACTION TIME

The reaction time of each response can be rated in terms of tertiles. After making a distribution of the reaction time to each response they can be rated on the basis of tertile ranges:

0
Lowest—shortest—tertile in reaction time.
1
Middle tertile in reaction time.
2
Highest tertile in reaction time.

This rating will, of course, yield only an inter-response comparison. For interpersonal comparison it would be sufficient to use the average—median—reaction time.

CONTAMINATION—INCONGRUITY

Some psychotic patients telescope two responses that occur in the same locale into one response. This sometimes results in some queer, bizarre and incongruous responses. These responses form the extreme end of the scale. On the opposite end of the scale are responses in themselves impossible in the real world but which nevertheless could be acceptable in a make-believe world. The scale is shown below:

0
Clear cut contamination.
1
Doubtful contamination.
2
Flight of fancy of the uncontrolled type.
3
Make-believe—animated cartoons of impossible acts or whimsical response.
4
Matter of fact response, not classified by any of the previous categories.

CONFabulation

Some subjects tend to weave a story of considerable length about the ink-blot. This represents one extreme end of the confabulation scale. At the opposite end is the clear cut specific unadorned response. The complete scale is shown below:

0
Clear cut example of confabulation.
1
Marked.
2
Some tendency.
3
Slight tendency towards adorning and confabulating.
4
Precise normal unadorned response.

Perseveration of Content

The number of times the same content appears can be counted and used as an index. The following scale may be used:

0
Exact repetition of a previous or subsequent response.
1. Similarity in content but not in form.
2. Similarity in form but not in content.
3. Some general similarity to a previous or subsequent response.
4. Response totally independent of previous or subsequent responses.

**MOOD**

Very often the subject indicates the mood that accompanied the percept by such terms as gloomy, and ominous, for example. The following scale can be used for recording the mood:

- **a**
  Very pleasant.
- **b**
  Pleasant.
- **c**
  Indifferent.
- **d**
  Unpleasant.
- **e**
  Very unpleasant.

This scale records the manifest mood of the subject as it is presented. Subjects may, however, show incongruity between the mood of the response and their own affect, that is, laughing while describing two men being burned in oil—*Card VI*. This affect modifies the mood in about the same way as quality modifies the importance of a factor. The affect may therefore be recorded as an exponent in the same way as quality is recorded. The affect may be classified in the same scale as the mood.

- **a**
  Very pleasant.
- **b**
  Pleasant affect.
- **c**
  Indifferent.

The instance cited would receive e as its mood score for the response and a in the exponent for the effect of the subject while giving the response, thus reading e^a.

**RATING OF SUBJECT'S ATTITUDE TOWARDS THE RESPONSE**

An important aspect of the response is the attitude that the subject exhibits towards it. The following aspects of this attitude can be recognized.

**SELF ESTIMATE OF ADEQUACY OF RESPONSE**

- **4**
  Certainty—makes no mention of its adequacy—apparently satisfied that it is good.

- **3**
  Resorts to rationalization in order to explain it.

- **2**
  Auto-critical—points out certain minor deficiencies.

- **1**
  Impotent—recognizes major deficiencies but cannot help giving response.

- **0**
  Perplexed—insecure and anxious about his response, wants to know whether it is correct.

**ATTITUDE TOWARDS REALITY OF RESPONSE**

This attitude can be measured on a continuum beginning with a crude acceptance of the reality of the percept as noted in some aments to the complete incredulity and feeling of strangeness that some depressives exhibit. In between these lies the normal interpretive attitude.

- **a**
  Painfully conscious of a difference between percept and interpretation.

- **b**
  "As if."

- **c**
  Interpretation.
Percept considered as real with some reference to its interpretation quality.

Crude acceptance of percept as real—"recognizing or guessing what it is."

**RATINGS ON POINT OF VIEW OF SUBJECT**

*a*
Being looked at—eyes peering at subject.

*b*
Standing still.

*c*
Looking up.

*d*
Looking down.

*e*
Moving—like in train.

*f*
Bending over or similar unusual position.

**GENERAL OBSERVATIONS ON SUBJECT'S PERFORMANCE**

**SUCCESSION**

Succession is usually measured roughly by noting the order of appearance of W, D, and Dr, responses in each card. Several categories of types of succession have been given by Rorschach, Skalweit, Beck and Klopfer all of whose systems are qualitative rather than quantitative in nature. Since succession as defined by Rorschach lends itself directly to measurement, a quantitative scale has been devised for measuring it and is explained in greater detail elsewhere.24 Here it is sufficient to indicate that a coefficient $\phi$, can be obtained from the scores which indicates the degree of regularity of the succession.

If the value of $\phi$ approaches unity, the succession may be regarded as rigid. When the value of $\phi$ lies between the extremes of zero and unity the succession may be regarded as either orderly or loose, orderly if it is greater than .50 and loose if it is less than .50. The following table shows a tentative interpretation for the four ranges of coefficients.

It is important to note that strictly speaking the succession will depend largely on the "comprehension type" of the subject and would be comparable only for subjects who belong to the same or similar types.

Similar procedures can be worked out for succession in the determinants and for succession in content or in any of the other factors.

**TABLE F**

**RATING SCALE FOR SUCCESSION**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Range of $\phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rigid</td>
<td>.80–1.00</td>
</tr>
<tr>
<td>2. Orderly or Systematic</td>
<td>.50–.79</td>
</tr>
<tr>
<td>3. Loose</td>
<td>.20–.49</td>
</tr>
<tr>
<td>4. Confused</td>
<td>.00–.19</td>
</tr>
</tbody>
</table>

**TURNING AND HANDLING OF CARDS**

4
Turns cards at will.

3
Looks at card from different angles with little or no turning.

2
Replaces cards meticulously with little or no turning.

1
Does not turn cards.

0
Handles cards very tentatively without turning.

**SUBJECT'S READINESS TO RESPOND**

4
Easy or fairly easy flow of responses.

3
Abstract response (gay, nice colors, etc.).

2
Vague comments.

1
Card descriptions (ink-blotcs, colors, etc.).

0
Complete refusal.

---

SELF-REFERENCE

4
Impersonal response.

3
Only slight degree of self-reference.

2
Some degree of self-reference.

1
Considerable degree of self-reference.

0
Completely self-referred response.

PROCEDURE FOR RATING FACTORS

The only element in which the proposed procedure would differ from the ordinary procedure in administering the Rorschach experiment is in the more extensive and exhaustive inquiry. When only the major factor in producing a given response is sought, the inquiry can be rather simple. However, if each of the factors is to be evaluated, sufficient data must be extracted from the subject to determine the relative importance of each of them.

For evaluating the locale, the ordinary aids such as copying the seen figure on a black and white picture of the Rorschach cards are quite helpful. The additional elements sought, the quality and the inclusiveness, can be gotten only by a careful scrutiny of the locale and the asking of the questions regarding portions that might have been excluded by the subject.

The rating of the determinants is a relatively simple matter since the choice between Form, Shading and Color as the chief determinant is usually quite obvious, and the relative importance of these three factors can be usually determined quite readily.

More difficulty may be met in dealing with the new interpretation category. The presence or absence of movement in the response can usually be readily ascertained. But its relative importance to the other two interpretation categories is not so easy. The general impression that one gathers in reading the Rorschach literature is that whenever movement occurs, especially human movement, it takes precedence in scoring over the other factors. Whether this is a desirable procedure is questionable. The differentiation between structure and surface appearance or texture will also present some difficulties. The content categories and the other categories are relatively easy to score and should offer little difficulty.

PROCEDURE FOR EVALUATING RESULTS

At the present time there are no standards available for interpreting the results that can be obtained by a tabulation of the ratings for each factor over all the cards. However, as such ratings become available a set of standards will probably emerge.

There are at least 3 different possible approaches to the evaluation of the ratings for the different Rorschach factors. First, the distribution of all the ratings for all the responses can be examined to determine the nature of the distribution. This can be done for each factor separately and a comparison made between factors for importance, and quality for example. These are the raw data. Since one major division between the cards depends on the presence or absence of color, the colored cards can be treated separately from the uncolored to determine the influence of the presence of color upon the other factors.

A second approach to the problem is to consider each card as a separate unit and draw up the pattern structure of the responses to each card for all the factors both on the importance and quality variables. When this is done, it may be possible to represent the total performance pattern on the ten cards in some unique code or index to permit comparison of persons or groups.

A third approach is to consider the personal response as the unit and represent its structure by some index. If the responses can be grouped into like-structured sub-groups, a complete representation of the subject's performance can be obtained in such a manner.

It should be kept in mind that in obtaining the medians, all responses should be
counted regardless of whether the factor entered into the determination of the response. However, when the factor in question does not occur on a given card at all—as for example color in the uncolored cards—it should not be counted for the response in question. In computing the medians for quality, only the responses on which the factor entered should be counted.

Other methods for evaluating the results will no doubt occur but whatever the method may be it cannot be based on a secure foundation unless some bookkeeping method such as the one proposed here is worked out for recording and evaluating the responses.

**Advantages of This Method**

The advantages of this method inhere primarily in the fact that it subjects the Rorschach experiment to psychometric rating scales of a more or less objective nature. At the present time this is done intuitively or haphazardly by the Rorschach worker, and the evaluation by more objective methods ought to either crystallize present day methodology or throw new light on the personality structure as evidenced by the configuration of Rorschach factors that determine the response.

Second, at the present time each response is very often regarded as the resultant of one or at most two—a major and an additional—factors. The good Rorschach experimenter keeps in mind the other factors that may have played a part in determining the response until he begins the task of interpretation. At that time he marshals them out as evidence for or against a given personality structure. There is, however, considerable danger that the facts that do not fit in with a tentative interpretation will be crowded out of the interpreter's mind. The method presented here records all the judgments simultaneously and thus makes it unnecessary to extend the span of memory of the examiner unduly.

Third, at the present time the proportionate occurrence of a factor as well as its absolute occurrence, is taken into consideration. It is well known that proportions based on a small number of cases can be highly misleading. The method provided here avoids the necessity for using proportionate figures. Since each response is scored for each factor, there will always be as many scores for each factor as there are responses. Consequently the average weights for each factor will be comparable.

Fourth, there is a tendency to confuse the importance of a factor with the quality of the factor in a given response. By separating out these factors, we get a more specific picture of what determined the response.

Fifth, such continua as popular-original, inclusiveness—cutting off of parts—succession, for examples, can be quantified on a given scale and such quantification will no doubt add to the conciseness of scoring as well as to the ease of interpretation.

It should be remembered that this psychometric approach is in no way intended to displace the intuitive insight that clinicians attain. It is only aimed to facilitate the interpretation and should prove especially useful for the learners in the beginning stages of interpretation. It may be that after they have gone through some such rigorous system of scoring scales, they may not need them further in their daily work. However, for the research worker in this field such schemes for recording data are well nigh indispensable.

It will of course become necessary to make precise definitions of each of the factors that are now generally accepted as determiners of responses, for without precise definition the rating scales will be worthless. This seems to be the first task that confronts the learner anyhow. It is also interesting to note that as one begins to examine the various elements that enter as determiners of a response, it becomes clear that not all the possible elements have been identified. As more of these elements are discovered an evaluation of the complete Rorschach performance can be more nearly achieved.
SUMMARY

The literature on visual perception has been reviewed and the links traced between the findings of experimental psychology and the methods of Rorschach experimentation. In keeping with the sketched experimental framework a new series of psychometric scales have been provided for scoring each response of the Rorschach. These scales differ from the present day scoring methods in several respects: they are based on well defined continua or in the absence of continua on well described discrete categories; each response is scored on all the scales rather than on only selected scales as is done at present; median weights for each factor can be readily obtained for a given person; and, the data provided by these scales can be treated statistically, even when the responses are relatively few, a treatment which the usual scoring method does not always permit.

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