Controversies in the Rorschach or Some Different Methods of Categorizing Rorschach Responses

JOURNAL OF PERSONALITY ASSESSMENT, 79(3), 399-421

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How Do I Score Thee? Let Me Count the Ways.

Or Some Different Methods of Categorizing Rorschach Responses

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The controversy over the merit of Exner's (1986) Comprehensive System (CS) has unfortunately led to a confusion of the CS with all methods of scoring responses to inkblots. Six other widely used Rorschach scoring methods and representative examples of the research they have generated are described. Objective tests of personality ask participants to acknowledge explicit motives, whereas projective tests sample implicit needs participants may not recognize. Projective methods provide unique means of studying personality dynamics. Whatever its merits and limitations, the CS is but 1 of a number of systems of categorizing Rorschach responses.

From their inception, the Rorschach inkblots have been a center of controversy. Advocates tend to minimize the problems associated with the scoring and interpretation of such responses, whereas opponents seize on its limitations, real and imagined. Ironically, the Rorschach test has unintentionally provided a uniquely ambiguous setting for various elements in American psychology to project their fears and wishes on how best to study personality. Extreme statements have been made about the merits of the Rorschach as a psychological test ranging from Frank's (1939) belief that it was the means to obtain an X ray of the personality to Jensen's (1965) calling for its elimination from clinical psychology. Garb (1999), in summarizing the flaws he found in the Comprehensive System (CS; Exner

1986), one highly popular method of scoring responses to inkblots, called for a moratorium not only on the CS but on the use of the Rorschach test itself in clinical and forensic settings (Garb, 1999, p. 316). American psychology has never seen the time when the wisdom, usefulness, and scientific respectability of using responses to inkblots have not been vigorously debated.

Time has not eased this controversy. With vastly improved methods of data analysis, today's arguments now tend to be more sophisticated than yesterday's, but the heat and passion continue as before. The current controversy concerns the scientific value of Exner's (1986) CS for scoring and interpreting Rorschach responses.

Even those who find fault with the CS agree that its use has invigorated and revived the field. As with many instances of fiercely held, opposing positions—whether matrimonial, parental, religious, or political—each side claims, with some justice, to be misunderstood and insufficiently appreciated by the other.

Critics (Wood, Nezworski, & Stejskal, 1996; Wood, Nezworski, Stejskal, Garven, & West, 1999) have claimed that the CS has been oversold and is seriously flawed, whereas supporters (Ganellen, 2001; Hiller, Rosenthal, Bornstein, Berry, & Brunnel-Neuleib, 1999; Parker, Hanson, & Hunsley, 1988) have claimed that the validity of the CS is equal to that of the Minnesota Multiphasic Personality Inventory

(MMPI; Hathaway & McKinley, 1951)

Although each party acknowledges the arguments presented by the other, neither is convinced, perhaps because each cites different data, and each claims unfair arguments by the other (Meyer, 2000; Wood, Nezworski, Stejskal, & Garvin, 2001). For those researchers who do not have a dog in this particular fight, observing this squabble is déjà vu all over again and produces the discomfort similar to that of inadvertently stumbling into a neighbor's domestic quarrel. Furthermore, this controversy, like many others in psychology (e.g., the scientific merit of psychoanalysis, the utility of manualized treatment) is not likely to be resolved by data, in part because the two sides cannot agree on which data are relevant and in part because the antagonists have different conceptions of the directions psychology should take. Ultimately, fatigue and boredom rather than sweet reason may put the issue to rest, although if history provides a clue it is quite likely to be resurrected again in a few years in slightly different form.

The quarrel about the CS has had a number of unfortunate consequences, among them the tendency of both friends and critics to confuse the CS with all methods of scoring Rorschach responses (e.g., Garb, 1999). Imprecise language has resulted in a synecdoche, confusing the part for the whole, resulting in a number of statements either condemning or defending the Rorschach test when in fact the issue was the CS, one of many different alternative methods for scoring and interpreting responses to the blots. As Kleenex® is not identical with all facial tissues, the CS, although the best known and most frequently used scoring system, is not synonymous with the Rorschach method, a distinction often overlooked by those unhappy with the CS.

These other methods differ from the CS on at least three important dimensions. First, except for Holt's (1966) primary process system, they are simpler, less ambitious, and much easier to use. Second, they are all tied to some variant of psychoanalytic concepts. In contrast, the CS is guite like the MMPI in its raw empiricism, although a recent study (Viglione, Brager, & Haller, 1991) incorporated psychoanalytic thinking into CS interpretation. Third, they are mainly research instruments, used almost exclusively to study personality dynamics either between groups or within a group from pretreatment to post treatment condition; that is not the situation with the CS, a clinical measure frequently employed for forensic or diagnostic purposes. Assessment methods that purport to provide a psychiatric diagnosis must guarantee norms adequate for that purpose. Indeed, the present controversy about the CS turns on that very point. In contrast, because norms are not particularly relevant for investigating between-group differences, any method of Rorschach scoring designed to examine personality dynamics is much less dependent on normative tables than is the CS. Furthermore, except for the Holt (1966) system, evaluating the responses on these other measures is not nearly as time consuming as it is for the CS because fewer Rorschach variables are utilized and inter-scorer reliability is almost always quite satisfactory.

In this article, I describe six non-CS assessment procedures that rely heavily on the content and to a lesser extent the structural characteristics, of responses to inkblots as a means of investigating personality dynamics. Over the years, a number of content categories have been studied for this purpose (Blatt, Brenneis, Schimek, & Glick, 1976; Burke, Friedman, & Gorlitz, 1988; Cerney & Shevrin, 1974; Coonerty, 1986; Cooper, Perry, Hoke, & Richman, 1985; De Vos, 1952; Elizur, 1949; Endicott, 1972; Fisher & Cleveland, 1958; Holt, 1966; Klopfer, Kirkner, Wisham, & Baker, 1951; Krohn & Mayman, 1974; Labarbera & Cornsweet, 1985; Levine & Spivack, 1964; Masling, Rabie, & Blondheim, 1967; Mayman, 1967; Perry & Viglione, 1991; Pruitt & Spilka, 1964; Singer & Wynne, 1966; Urist, 1977).

A good review of systems for scoring responses for object relations is provided by Stricker and Healey (1990). As the inkblots themselves can be interpreted in a variety of ways, responses to them can also be variously grouped or assembled. The test itself can be seen as polymorphous benign, having the potential for lending itself to a variety of purposes. Some of the scoring methods have been like mayflies enjoying only a brief life, whereas others have prospered and are substantially heuristic.

I describe six of the most frequently used systems for scoring responses along with some illustrative examples of how each has been used in research; a comprehensive review of such research is beyond the scope of this article.

#### BARRIER AND PENETRATION SCORES

Early in his career Fisher (1970) was asked to provide psychological assessment for a group of patients, among them arthritics. He noticed that the Rorschach responses of the arthritic patients were dissimilar from those of the other patients—they tended to report images with hard, sharp boundaries. He checked this observation against the responses given by other test participants and discovered that those patients with external symptoms such as arthritics reported many more inkblot associations that had definable boundaries than did those patients with such internal ailments as ulcers; this finding has been replicated at least three times (Fisher, 1970, pp. 209-212).

From this beginning, Fisher (1970) developed two scales for inkblot responses—the Barrier and Penetration scores (see Appendix A). In scoring a protocol, each response is given a score of 1 if it contained either a barrier or a penetration aspect; the total score therefore cannot be higher than the number of responses given to the full test. Either individually administered or group administered inkblot tests (Fisher sometimes used the Holtzman [Endicott, 1972] blots) could be scored this way. Most of his research utilized data gathered by group testing with the blots projected on a screen and the participants writing their associations to them. Such economy of data collection made possible the investigation of a number of hypotheses using a variety of different populations. Studies of inter-scorer reliability produced reliability coefficients for the Barrier response ranging from .82 to .97 and for the Penetration response from .83 to .99 (Fisher & Cleveland, 1958, p. 64). Consistency of responses from one form of the Holtzman to the other produced correlations ranging from .83 to .85 for the Barrier score and from .85 to .87 for the Penetration scores (Fisher, 1970, p. 160).

No exact number of studies using the Barrier and Penetration scores is available, but there is no doubt that except for the CS more research has been conducted using either or both of Fisher's (1970) scores than any other scoring scheme for inkblot responses. A conservative estimate is that several hundred studies have used the Barrier and/or the Penetration score. Although Fisher's scales have fallen from favor lately, at one time they were highly popular, particularly for investigations of the body image. The variety of topics investigated by Fisher and those influenced by him is impressive—various aspects of interpersonal behavior, physical and psychiatric illness, attitudes about the body and sexuality, ability to tolerate pain, and sociometric status.

The time a woman waits before consulting a physician after discovering a lump in her breast is positively related to her Barrier score, that is, the higher the score the

longer the delay. Both in a pilot study (N = 15) and in a larger follow-up (N = 26, p = . 05) Barrier responses predicted delay in seeking medical help (Fisher, 1970, p. 247). Male paraplegics (N = 40) with high Barrier scores were evaluated by staff members to have reached a better adjustment than those with fewer Barrier responses (r = .51, p = .001; Fisher, 1970, p. 242). Ability to tolerate pain was also positively correlated with the Barrier score. Male participants who reported more Barrier responses accepted more shock than those who reported fewer Barrier percepts at probability levels ranging from p = .05 to p = .005 (Fisher, 1970, p. 250).

The Barrier response also predicts response to stress—the higher the score the better coping ability. Competence on the Stroop Color Naming Test (Stroop, 1935) was correlated at .46, p = .00l with the Barrier score (Fisher, 1970, p. 249). In an experiment assessing social skills, 96 college women were asked to communicate with a laboratory partner about the experiment. Women with high barrier scores sent more messages (p = .0l) and had more units of communication (p = .05) than women who reported fewer Barrier scores (Fisher, 1970, p. 259). In a study of 19 women in an Asch conformity experiment, those who yielded to the majority reported fewer barrier images than those who did not yield (r = .40, p = .05); a larger investigation of 46 male students reported the same effect (r = .48, p = .00l; Fisher, 1970, p. 263).

The Penetration response proved difficult for Fisher (1970) to define: "This raises a serious dilemma as to the meaning to assign to it" (p. 177). It did not produce as many consistently significant results as the Barrier response and was treated as an exploratory measure. Even so, it was useful for some purposes. The inkblot responses of 70 male patients with chronic alcoholism in a Veterans Administration hospital contained more Penetration responses (p = .02) than those from 50 nonalcoholic, non-psychotic male patients (Fisher, 1970, p. 288). Hypnotic susceptibility in male patients but not female patients was correlated positively and significantly (p = .05) with the Penetration response (Fisher, 1970, p. 265).

### RORSCHACH ORAL DEPENDENCE SCALE

The Rorschach Oral Dependence Scale (ROD; Masling, Rabie, & Blondheim, 1967) was borrowed almost in its entirety from Schafer (1954) who briefly outlined several psychoanalytic themes that could be inferred from responses to Rorschach inkblots. Two of these themes are orality and dependency, generally seen in psychoanalytic theory as one trait combining both features. A simple, one-page manual (see Appendix B) lists examples of oral and dependent percepts; the scale is essentially lexical with any mention of a key word warranting a score. Every response containing either an oral or a dependent word is given a score of 1.

Inter-observer reliability is limited primarily by poor handwriting of the participant (most data for the ROD have been collected using the group Rorschach) and scorer distractibility. Percentage agreement between raters ranges from 85% to 95% (Bornstein, 1996). A more stringent method of assessing reliability, calculating correlation coefficients between scorers, consistently produces rs of .90 and above (Bornstein, 1996). Kappa coefficients demonstrating reliability above what can be expected by chance alone have been in the range of .80 (Bornstein, 1996). Test-retest reliability coefficients in a sample of college students was .67 after a 16-week interval between tests, .48 after a 28-week interval, and .46 following a 60-week period (Bornstein, 1996).

The ROD has been employed in over 50 published studies (Bornstein, 1996) and was used in nearly 70% of investigations of implicit dependency (Bornstein, 404 MASLING 2002). A meta-analysis of 21 studies of dependency showed a combined effect size of . 37 for the ROD (p = .001); the MMPI, used in 5 studies, produced an effect size of .20 (Bornstein, 1999). High-ROD participants in Psychology lOl classes are more compliant with authority than low-ROD participants and complete their requirements to participate in psychological experiments earlier in the semester, a result found in two independent samples (Masling, 1986). In a difficult problem solving experiment (Shilkret & Masling, 1981) high-ROD participants looked the experimenter more often than the low-ROD participants; those participants who reported more dependent as opposed to oral percepts asked for help more frequently than did those who report fewer such images (p = .001).

Scores on the ROD have repeatedly predicted sensitivity to interpersonal cues. Several studies have shown that high-ROD participants, particularly male participants, perceive their friends, teachers, and therapists more accurately than low-ROD participants (Bornstein, 1996). Social isolation produces greater autonomic nervous system activation in high scoring ROD participants than in those who score lower (Masling, 1986).

### CONCEPT OF THE OBJECT

The scales previously described scored all responses falling within their guidelines; no distinctions or assessments were made about their form quality. For these measures, it was sufficient to show that the participants had some pertinent association to the blots to warrant a score. Blatt, Brenneis, Schimek, and Glick (1976) took a different tack in utilizing inkblot responses. Their study of object representations, "the complex mental schemata of significant objects encountered in reality" (p. 8), considered both content and structure of the percept. For Blatt, Brenneis, and Schimek (1976) both the developmental level of the response and its form quality are

important markers of psychopathology. Their scale accordingly assesses the adequacy of the developmental level of object representations and the extent of their impairment. A highly truncated version of the scale is found in Appendix C. Blatt, Brenneis, and Schimek (1976) described three studies: (a) the changes in Rorschach responses of a group of 37 normal participants tested four times between the ages of 11 to 12 and 30; (b) the human responses in a group of 48 young, psychiatric inpatients; and (c) a comparison of Sample l at age 17 to 18 with the hospitalized sample. The normal participants showed [A] significant increase in well-differentiated, highly articulated, and integrated human figures seen in constructive and reciprocal interactions. In comparison with normals, patients reported human figures that were significantly more inaccurately perceived, distorted, and partial and that were seen as inert or engaged in unmotivated, incongruent, nonspecific, and malevolent activity. (p. 364)

Another striking, provocative result was also found: Unlike the normal participants, the human percepts of the psychiatric patients' developmentally advanced percepts, in contrast, were inaccurately perceived. The clinical utility of these findings were explored by Blatt and Lerner (1983b) who utilized the concept of the object scoring method on five prototypic psychiatric cases.

A more detailed description of both this theory and method can be found in Blatt, Ford, Berman, Cook, and Meyer (1988) and in Blatt and Lerner (1983a) where the changes from pretreatment to post treatment of 90 psychiatric patients are presented. Although a number of Rorschach variables did not change significantly from pretreatment to post treatment, Blatt et al. found that anaclitic patients (e.g., those with concerns regarding affection and intimacy) reported fewer elaborations of inaccurately perceived human forms than the introjective patients (e.g., those with issues of anger, aggression, self-definition). Inter-scorer reliability was high—90% or higher in all but two categories in which the percentage agreement fell to 82% and 84% (Blatt, Brenneis, & Schimek, 1976).

### RORSCHACH PROGNOSTIC RATING SCALE

A major, intractable problem in clinical psychology and psychiatry is to separate those who would profit best from psychotherapy from those who would not. The Rorschach Prognostic Rating Scale (RPRS) was developed by Klopfer et al. (1951) for this purpose. Klopfer et al. hypothesized that ego strength, reality testing, and emotional integration were the essential personal qualities necessary to complete the hard work required in psychotherapy and they selected Rorschach variables they thought would assess those attributes as well as the participants' potential for developing ego strength. (See Appendix D for a summary of the scoring system.)

They reasoned that present ego functioning mirrored current adjustment but potential ego strength was a resource that could be mobilized during psychotherapy. Meyer and Handler's (1997) recent search of the literature for studies of the validity of the RPRS found 18 appropriate "investigations that used the RPRS as a baseline measure to predict longitudinal outcome" (p. 5) of psychotherapy. Their Meta analysis on the 20 samples that met the criteria for inclusion in the study included 752 patients in psychotherapy (M = 38 patients per study) with a length of follow-up 352 days later.

The results of the Meyer and Handler (1997) meta-analysis were remarkably robust, p values reaching to 6 zeroes: Those with high scores on the RPRS profited more from psychotherapy than those with low scores. The effect size was .56, about the same magnitude (.52) as the relationship between gender and concurrent arm strength and considerably larger than the effect size (.03) between chemotherapy and subsequent reduction in breast cancer mortality and the effect size (.21) between the results of a cardiac stress test and subsequent cardiac disease. Meyer and Handler concluded that the RPRS is able to predict the results of psychotherapy for children and well as adults, voluntary patients or court referred, schizophrenics or less disabled patients, and those followed up 6 months to 36 months later (p. 25).

Partly because the Klopfer et al. (1951) system is no longer frequently taught in graduate programs (Hilsenroth & Handler, 1995) and partly because the RPRS is cumbersome to use, this scoring method has lately fallen out of favor. About 27 studies have been published connecting the RPRS to some external criterion, but only 3 have appeared in the last 20 years. All but a few attempted to predict success in some kind of therapy or training program; populations include student nurses (Mindess, 1957), stutterers (Sheehan, Frederick, Rosevear, & Spiegelman, 1954; Sheehan & Tanaka, 1983), incarcerated offenders (Edinger & Bogan, 1976), and beginning teachers (Brawer & Cohen, 1966). Edinger and Bogan noted that "no RPRS components have been found to be efficacious for all populations, and it appears that these components are differentially indicative of the adjustment capacity across populations" (p. 877).

#### A METHOD FOR ASSESSING PRIMARY AND SECONDARY PROCESS IN THE RORSCHACH

A number of psychoanalytically oriented scholars view the Rorschach as a unique means for securing knowledge about individuals' inner needs before the defense mechanisms disguise, shape, and transform them into unrecognizable form. Freud's (1915/1958) concept of the primary process—a mode of thinking relatively unregulated by logic, reality testing, or rules of time and space but is wishful and

autistic and controlled mainly by unconscious forces seeking instinctual discharge—seems particularly susceptible to assessment via associations to inkblots.

Kris's (1952) theory of regression in the service of the ego holds that primary process thinking is essential for creative work but only to the extent that it is under the control of ego processes. Holt (1978) described a 25-year effort to convert "Rorschach's familiar inkblot test into an operational measure of primary process thinking" (p. 211). His system has been frequently used to investigate the relationship between primary process thinking and affective and cognitive activities.

Other scoring systems (e.g., the ROD and the Barrier and Penetration scores) do not attempt to differentiate between a positively toned response ("a delicious apple pie") and a negatively toned one ("an apple pie crawling with worms") or between realistic and unrealistic responses but are concerned only in the content categories the participant imposes on the blots. In contrast, because both Blatt and Holt have maintained that a great deal is lost when diametrically oppositely Colored responses are considered equivalent, their systems use finer gradations in scoring. For Holt, a sadistic response is not the equivalent of a masochistic response even though both are concerned with hostility, and "a flat-chested woman" is not scored the same as "breasts," although both are obviously oral references.

The scoring manual has undergone a number of revisions and to this date is still not published in final form, but the Holt 1978 version has 22 categories; a skeletal version of that manual is found in Appendix E. Major categories within this system include Adaptive Regression (AR), a measure of intensity of primary process material and the extent to which it is integrated; Defense Demand (DD), an index of intensity of the response; and Defense Effectiveness (DE), an estimate of the cognitive integration of primary process content. Holt (1978) reported agreement of .98 and .90 in judging whether a responses should be scored based on four studies with N = 134; when the total number of responses is controlled, the .98 agreement shrinks a bit to .91 (p. 257). In judging for presence or absence of specific response categories, Holt (1978) held that "the level of agreement on the individual category is about that of traditional Rorschach determinants, about 65%" (p. 258). Russ and Grossman-McKee (1990), working with children's protocols, reached inter-rater reliability coefficients of .76 for DD, .88 for DE, and .90 for AR.

The ability of the Holt system to predict creativity (Pine & Holt, 1960), problem-solving ability (Blatt, Allison, & Feirstein, 1969), and skill in generating remote associations (Murray & Russ, 1981) has been well documented. In addition, Gamble and Kellner (1968) reported that creative people could call on more primary process than those who are less creative. Particularly impressive is the ability of the Holt

system to predict creativity and cognitive skills in children. Russ (l980) found that the AR measure in second-grade students was significantly related to their reading ability even after IQ was partialed out, a result that also held true (p = .001) for the same children 1 year later (Russ, 1981). Dudek and Verreault (l989), studying creativity in fifth and sixth graders, concluded that creative children reported significantly more total primary process responses than did the less creative children.

#### MOA

The turn in psychoanalysis from a preoccupation with drives to an interest in object relations has seen a parallel concern with investigating responses to the Rorschach blots for indications of the quality and extent of self-other relations. Stricker and Healey (1990) reviewed projective instruments for assessing object relations. Urist (1977) developed the Mutuality of Autonomy Scale (MOA) for scoring inkblot responses that assess "the degree to which relationships between figures on the Rorschach were perceived in terms of mutuality of autonomy" (p. 3). He assumed that participants' descriptions of relationships between animate and inanimate figures on the inkblots would mirror their human relationships. A brief edition of the scoring manual is found in Appendix F.

Inter-scorer reliability for the MOA has yet to be firmly established. A recent study (Holaday & Sparks, 2001) reported that previous efforts to establish scoring reliability ranged from 52% to 91%, with an average of 74%. Holaday and Sparks revised the original scoring method and produced inter-rater reliabilities of 97% (or 82% using a different method of calculation).

As might be expected, experimenters interested in autonomy have investigated the effects of separation and loss. Brown-Cheatham (1993) examined the MOA scores of 40 father-absent Black boys aged 6 to 12. He found that boys whose fathers had left the family involuntarily (through death, incarceration, or hospitalization) had less adaptive MOA responses (p = .02) than those boys whose fathers had negotiated their absence from the family (because of work or agreed-on separation).

Similar results were reported by Goddard and Tuber (1989) who found that children formally diagnosed with separation anxiety disorder had more disrupted object relation scores than the control participants (p = .05). Clinging responses, in particular, were more frequent in the children with separation anxiety disorder than in the controls.

The MOA apparently assesses a quality similar to ego strength. Tuber (1983) scored the Rorschach records for MOA of children ranging in age from 6 to 11 who had been in residential psychiatric treatment. Follow-up occurred at least 5 years later when

these participants were 17 to 30 years old. Tuber reported that significantly fewer of those with positive MOA scores had been rehospitalized; analysis by gender of these results showed that the MOA predicted the rehospitalization rate of the male patients but not the female patients. Hart and Hilton (1988) compared the Rorschach scores of female college students aged 17 to 20 who used contraceptives with those who did not. They found that MOA scores of those who practiced birth control were higher (p = .01) than those who failed to practice safe sex.

#### DISCUSSION

Considerable research has been generated by the various methods for scoring responses to inkblots, demonstrating once again that responses to ambiguous stimuli reflect measurable personality dynamics. It says something about the acrimony of the present debate that this statement, which should have been self-evident, needs to be made. An impressive variety of problems and a large array of participants have been investigated. A number of the questions about personality development and dynamics require the use of projective methods. Whatever individuals see in an ambiguous stimulus, the response is uniquely theirs. Therein lays the value of the Rorschach test. With no rules to follow, with no right or wrong answers, the test participant must look for internal cues and associations to a personal past as allowed and shaped by ego processes.

A variety of systems are available for evaluating and quantifying these idiosyncratic responses, ranging from the quasi-lexical procedures of the Barrier and Penetration scores and the ROD to the more intensive examinations of the Holt (1966) and Klopfer et al. (1951) methods. The choice of scoring method has apparently been dictated by the problem investigated and theoretical allegiance of the experimenters; no measure appears to be useful for all questions. In all cases, reliability of scoring is at least acceptable. Moreover, interest in using Rorschach responses to investigate personality dynamics is not waning—at least nine new scoring systems have been developed and used since 1970.

Despite the abundant evidence of the utility of projective tests, some scholars persist in seeing them as somewhat less than respectable and as scientifically suspect. A popular Psychology 101 text declared that "projective tests tend to have problems of reliability and validity. ... The validity of projective tests is also low, because they are not very effective in predicting behavior" (Bootzin, Bower, Crocker, & Hall, 1991, p. 511). Another text claimed that "the validity and reliability (of the Rorschach and Thematic Apperception Test [TAT]) have been questioned. "... perhaps as a result, their use has declined since the l970s" (Morris, 1996, p. 479). Goldstein (1994) concluded a discussion of the Rorschach and TAT by stating that "efforts to determine

whether they reliably measure aspects of personality have yielded mixed results. ... The TAT is open to similar criticisms of low reliability and validity" (pp. 623-624). The motive to find flaws and minimize advantages in projective devices reminds me of the answer the young bride gave when someone asked her to describe her husband: "He has an even disposition—always critical."

McClelland, Koestner, and Weinberger (1989) speculated that the difficulty some psychologists experience in recognizing and accepting data favorable to projective techniques stems from the cognitive revolution in psychology and a turn away from interest in both Freud's (1915/1958) concepts of unconscious processes and Hull's mechanistic models of motivation (McClelland et al., 1989, p.

690). In addition, given the psychodynamic basis for the scoring systems described here, acknowledging their merit requires understanding the ornate, orotund, parsimony-resistant language of psychoanalysis, an unpalatable brew for many psychologists to swallow. Whether data justify rejection of 100% of all of

Freud's (1915/1958) and Hull's (McClelland et al., 1989) positions is another matter.

Projective methods are relatively free from social desirability effects, none requiring the observer to admit personal failings or problems, unlike the situation with self-report measures of personality. The great advantage of objective tests, which is also a considerable liability, is their face validity. Whereas a self-report test of depression directly asks participants about being depressed, a projective test requires a risky leap from response to predicted behavior. Although it is certainly easy to ask a participant directly about being depressed, the responses might not be valid for several reasons: Some participants know the answer but refuse to tell, others try to reply correctly but lack the self-knowledge that allows them to do so, and a few are so irritated (or threatened) by the test and/or testing situation they will say anything to terminate the session (e.g., the "screw you" effect; see Masling, 1966). Because face validity of objective tests is so high, it is easier to fake "good" or "bad" answers to them than to projective tests (Bornstein, Rossner, Hill, & Stepanian, 1994).

In a purely rational world, naïve trust that self-reports reflect the "true" situation should have been seriously tempered by the important findings of Shedler, Mayman, and Manis (1993) that some participants in their study gave false positive reports of their mental health either because they knew the truth or because they did not. The impact of the Shedler et al. study has been negligible in the assessment field at large, perhaps because of a reluctance to accept the active presence of defense mechanisms that allow all of us to carry on everyday behavior without knowing the underlying reasons. Those who devalue the study of responses to ambiguous stimuli tend to underestimate the limitations inherent in self-reports.

For years, "it has been commonly assumed that questionnaires and projective tests are simply alternative ways of getting at the same variable" (McClelland et al., 1989, p. 690). However, sufficient evidence is now available to demonstrate that projective devices and self-reports assess different facets of a variable (Bornstein, 2002; McClelland et al., 1989). Self-reports describe explicit motives to the extent that participants are able and prepared to share them with the investigators, whereas projective tests sample implicit needs that participants may not recognize. It is not surprising, then, that when a personality construct is assessed using both self-reports and projective measures, the inter-test correlations are weak (Bornstein, 2002; McClelland et al., 1989). McClelland et al. (1989) claimed that few facts are as well established as the low relationship between these two methods of assessment, "yet psychologists have had difficulty in dealing with it" (p. 691).

Research has demonstrated that projective tests, particularly the TAT, are able to predict long-term behavior, whereas self-report scales predict present responses to specific situations (Bornstein, 2002; McClelland, 1980). TAT measures of the achievement motive have predicted entrepreneurial behavior in both the United States and India over a period of years. An inhibited power-motive syndrome inferred from TAT stories has predicted managerial success over a 16-year period in the United States and elevated blood pressure in a U.S. sample over 20 years. In contrast "a variety of self-report measures of similar motives had no predictive validity over time" (McClelland et al., 1989, p. 691).

No Rorschach study can claim the long-term predictive ability of the TAT, although whether because of lack of effort or lack of success is difficult to tell. The RPRS has predicted success in therapy 1 year after test administration (Meyer & Handler, 1997), and Russ (1981) demonstrated that reading ability in the third grade, after IQ was statistically controlled, can be predicted by the children's primary process scores obtained 1 year earlier. In Rorschach research, the longest time interval between test administration and predicted behavior was 5 years; MOA scores of psychiatric inpatient children aged 6 to 11 successfully predicted the rehospitalization rates of the male patients when they were 17 to 30 years old. (Tuber, 1983). The case for the utility of Rorschach scores would be bolstered if there were more longitudinal studies, but even this limited sample demonstrates that whatever psychological processes responses are reflected in responses to inkblots they tend to be stable over a sizeable time period.

Some problems in personality theory are best studied using measures of self-attributed motives. Generally these are issues of "immediate, specific responses to specific situations or choice behavior" (McClelland et al., 1989, p. 691). In contrast, "implicit motives predict spontaneous behavioral trends over time" (McClelland et

al., 1989, p. 691). When dependency is investigated using both self reports and projective tests, the results are fairly comparable, although the advantage if any goes to the projectives. The ROD in 21 studies had an effect size of .37, whereas the Edwards Personal Preference Scale (Edwards. 1959; 9 studies) had an effect size of . 35, the Millon Clinical Multiaxial Inventory Dependency Scale (Millon, 1987; 9 studies) had an effect size of .17, and the MMPI (5 studies) had an effect size of .20 (Bornstein, 1999). Any investigation of generalized behavior over time might more effectively be pursued by using an implicit measure of motivation like the Rorschach.

Disowning all measures of interpreting Rorschach responses because of perceived flaws in the CS (Garb, 1999, is a good example of this) is a dramatic overgeneralization and has no empirical foundation. As Xerox® is not synonymous with photocopying nor New York with New York State, the CS, for all its virtues, is not another name for the Rorschach method. This article reviewed six other widely used methods of categorizing and interpreting responses to inkblots. There are many more yet to be discovered, the number restricted only by limitations of creativity and energy. Devotion to science does not require discarding useful ideas but does mandate accepting good data, especially and particularly when they disconfirm presently held prejudices.

There are several trends in the research I reviewed. First, it is sad that with a few exceptions almost every experiment reported here was only a single, non replicated study. How many positive results were obtained by chance is impossible to ascertain, but the odds are high that some of the findings were fortuitous. In contrast, most articles in first flight journals in cognitive psychology and social psychology describe a series of interlinked studies. Personality psychology would profit greatly from using this model. Second, gender differences are the rule rather than the exception. The best way not to find gender differences is to group male participants and female participants before analyzing the data. Despite this, many experiments did not analyze for gender or else investigated only one gender and generalized to both. Third, the magnitude of correlations frequently reached impressive statistical significance but could account for only a limited amount of the variance. On a number of dimensions, investigating personality by means of projective methods is still a rather crude science.

#### SUMMARY

A considerable range of personality variables and populations has been examined by categorizing and quantifying responses to inkblots. Unlike objective tests, which depend on a respondent's ability and willingness to self-report, projective tests are much less influenced by self-serving defenses. As a result, projective methods are

uniquely able to investigate questions relatively protected from objective testing. That objective and projective methods assess different aspects of a variable is evident from the generally low inter-test correlations obtained when both are used on the same problem. Despite the admirable record of the six inkblot scoring methods described here for clarifying complex issues in personality functioning, projective tests are generally seen as lacking scientific respectability, perhapsbecause most have a psychodynamic basis.

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# Scoring System for Barrier and Penetration Responses

# The Barrier Response

- 1. All references to clothing.
- 2. All references to buildings and similar enclosing structure.
- 3. All references to vehicles with some containing or "holding" qualities.
- 4. All references to that which contains, covers, or conceals:
- a. Containers.
- b. Coverings.
- c. Concealment.
- 5. All living things (except for humans) described as having special surface qualities.
- 6. All creatures possessed of shells or similar protective structures.
- 7. All references to geographic or natural formations with delimiting or container-like qualities.

### The Penetration Response

- 1. All references to the fact of disruption, penetration, damage, or destruction of any object or living thing.
- 2. All references to body openings or to acts involving body openings.
- 3. All references to perceptions that involve a perspective of bypassing or evading the usual boundaries of the body or other objects.
- 4. All references to the process of entering or leaving structures and also the means for doing so.
- 5. All references to natural contexts that involve intake or expulsion.
- 6. All images that are insubstantial or vague in their delimitation.

A more detailed list, with examples, is found in Fisher (1970, pp. 605-609).

### APPENDIX B

Scoring for Oral and Dependent Responses

- 1. Foods and drinks.
- a. Anything that can be eaten or drunk in its present state.
- b. An animal can be scored only if it is invariably associated with being edible.
- 2. Food sources.
- a. Obvious sources of food.
- b. Inferred sources.
- 3. Food objects.
- 4. Food providers.
- 5. Passive food receivers.
- 6. Beggars, those praying for help.
- 7. Food organs.
- 8. Oral instruments.
- 9. Nurturers.
- 10. Gifts and gift givers.
- 11. Good luck symbols.
- 12. Oral activity.
- 13. Passivity and helplessness.
- a. Explicit statements of helpless or passive condition.
- b. Embryo is scored. Baby is not scored unless there is some suggestion of passiveness, frailness.
- 14. Pregnancy and reproductive organs.
- 15. Baby talk in the participant's responses.

16. Negations of oral percepts are scored.

A more detailed list is found in Masling (1986, p. 77).

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APPENDIX C

Developmental Analysis of Object Representations

(Blatt & Lerner, 1983b, p. 10)

Accuracy

F-, F+

Differentiation

Quasi-human detail: (Hd)

Human detail: Hd

Quasi human: (H)

Human: H

Articulation

Inappropriate (-), appropriate (+)

Perceptual

Size (Sz), posture (Po), hair style (Hsy)

Clothing (Cl), physical structure (PSt)

Functional

Sex (sex), Age (Age), Role (Ro), Specific identity (Spld)

Motivation of action

No action (No Act)

Unmotivated action (Unmot)

Reactive action (React)



Form quality

Amount of movement in space

Freedom in seeing movement

Cultural distance

Form quality of M

Amount of movement in space

Freedom in seeing movement

Cultural distance

Form quality of M

Natural and mechanical forces

Abstract forces

Form quality of m

Form dominant versus form formless/minus form quality

Warm, soft, or transparent surface

Versus shading as color versus

Shading in a diseased organ

Form dominant versus form secondary/formless versus minus form quality

Shading evasion, shading insensitivity

Form dominant versus form secondary

Versus formless/minus form quality

Color description/color denial/symbolic

Color (euphoric)/color comments

Versus forced or arbitrary use of color

Versus symbolic color (dysphoric)/Color in a diseased organ versus color

Naming/color contamination

# Averaged across protocol

Averaged across protocol
APPENDIX E
The Holt (1978) Scoring System for Primary Process
Responses on the Rorschach
Libidinal
Level l
Oral
Anal
Sexual
Exhibitionistic-voyeuristic
Homosexual (sexual ambiguity)
Miscellaneous libidinal
Level 2
Oral
Anal
Sexual
Exhibitionistic-voyeuristic
Homosexual (sexual ambiguity)
Miscellaneous libidinal
Aggressive
Level l
Potential: subject or object
Active: subject or object
Results

Level 2

Potential: subject or object

Active: subject or object

Results

Anxiety and guilt

Level l

Level 2

#### APPENDIX F

The Urist Mutuality of Autonomy Scale (Urist, 1977, p. 5)

- l. Figures are engaged in some relationship or activity.
- 2. Figures are engaged together in some relationship or parallel activity.
- 3. Figures are seen as leaning on each other, or one figure is seen as leaning or hanging on another.
- 4. One figure is seen as a reflection, or imprint, of another.
- 5. The nature of the relationship between figures is characterized by a theme of malevolent control of one figure by another.
- 6. Not only is there a severe imbalance in the mutuality of relations between figures, but here the imbalance is cast in decidedly destructive terms.
- 7. Relationships here are characterized by an overpowering, enveloping force.

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Received February 10, 2002

Revised February 27, 2002