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Effective Use of Projective Techniques in Clinical Practice: Let the Data Help With Selection and Interpretation

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By learning about the validity of individual test scores, psychologists can avoid using scores that are invalid and making judgments that are potentially harmful to their clients. This is important not only for improving clinical and forensic practice but also for avoiding lawsuits. In this article, the effective use of projective techniques is described, with attention to the overperception of psychopathology, diagnosis and the description of symptoms, and the detection of child abuse. Guidelines are offered for using the Rorschach, Thematic Apperception Test, human figure drawings, and the Washington University Sentence Completion Test.

Criticism of projective techniques, especially the Rorschach, has mounted in the past few years. For example, after conducting a comprehensive review of the research literature, Hunsley and Bailey (1999, p. 266) concluded that "there is currently no scientific basis for justifying the use of Rorschach scales in psychological assessment." Similarly, Grove and Barden (1999) concluded that expert witness testimony based on the Rorschach should not be found admissible in legal settings. In addition to receiving widespread attention in the psychological community, the controversy has been described in popular science and general news outlets, including *Scientific American* (Lilienfeld, Wood, & Garb, 2001) and *The New York Times* (Goode, 2001).

In this article, we make recommendations for clinical practice in light of the growing controversy surrounding projective techniques. Topics include the overperception of psychopathology, the assessment of psychopathology (including diagnosis and the description of symptoms), and the detection of child physical and sexual abuse. A case history is presented to illustrate problems that can occur with the use of the Rorschach. Throughout this article, we offer guidelines for the use of projective techniques.

Case History

Failure to recognize the shortcomings of projective techniques, particularly the Rorschach, can lead to poor assessment decisions and harm to clients. The types of problems that can arise are illustrated by the following case history, which describes a psychologist who lost his license after a former girlfriend complained to the state licensing board that he was abusing alcohol.[1] After his license was suspended for a year, he was required to undergo psychological testing. Testing indicated that he appeared to have severe psychopathology, and he was unable to regain his license. Finally, his lawyer asked one of us (Howard N. Garb) to review the psychological testing. The case history is described in greater detail below. We refer to it in later sections to illustrate the importance of following guidelines for improving clinical practice.

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[1] Appreciation is expressed to "Dr. B" for granting us permission to include his case history. Certain facts have been altered to protect his identity (e.g., *B* is not the initial for his last name).

Dr. B is in his mid- to late 60s. He has a PhD in clinical psychology from a Big Ten University. Although elderly, he continues to work. Several years ago, a former girlfriend told the state licensing board that he was abusing alcohol, thereby implying that he was impaired. The woman had been his student for 2 years. He had started to see her socially 2 years after she graduated from college. While the complaint was being investigated, Dr. B entered into a troubled relationship (with a different woman) and began abusing liquor. He became depressed, was diagnosed as having major depression, and was admitted to a psychiatric hospital. This was his first and only psychiatric hospitalization. Dr. B was placed on an antidepressant, entered psychotherapy, and joined Alcoholics Anonymous. He voluntarily told the state board about his psychiatric hospitalization. His psychotherapist told them that Dr. B. had been impaired for the 3 weeks surrounding the time of his hospitalization (but that he was not impaired afterward). His license was suspended for a year. He agreed to remain in psychotherapy during this time and to undergo psychological testing at the end of his one-year suspension.

At the end of one year, Dr. B was given a battery of psychological tests. The psychologist who conducted the testing has a prestigious reputation and is a member of the Rorschach Research Council, which consults with John Exner. With regard to neuropsychological test results, Dr. B was described as being "quite sharp" and "entirely normal." On the Minnesota Multiphasic Personality Inventory—2 (MMPI–2), he was described as being "essentially normal." However, on the Rorschach, he was described as having severe psychopathology. As a result, the state board would not return his license.

At the request of the attorney for Dr. B, a legal affidavit was prepared based on empirical research. The affidavit described problems with the portions of the test report that were based on the Rorschach. Within a few days, and without any further litigation, a settlement was reached. After his license was returned, Dr. B commented on how his Rorschach results had made him feel: "The whole time there was a feeling that my peers didn't like me. My self-worth suffered immeasurably. In therapy, I had to learn to redefine myself as someone who is not only a psychologist. I have some scars and bruises and I always will."

To understand why the use of the Rorschach can lead to the overperception of psychopathology, one needs to become familiar with problems that are associated with the norms for Exner's (1991, 1993) Comprehensive System (CS). Problems with the CS norms, along with recommendations and guidelines for clinical and forensic practice, are described in the following section.

The Rorschach and the Overperception of Psychopathology

Clinical Guideline 1: Exercise caution when using the CS norms, as research indicates that their use is related to the overperception of psychopathology. In many instances, it may be best not to use the CS norms.

The CS is the most popular system for using the Rorschach. In addition to providing detailed rules for administration, scoring, and interpretation, the CS provides sets of norms to describe the results for relatively normal children and adults. The CS scores discussed in this article, along with brief descriptions of the constructs the scores purportedly measure, are listed in Table 1.

Table 1
Comprehensive System Scores Discussed in the Article and the Constructs They Purportedly Measure

CS score	Construct purportedly measured
EB style (% of ambitent protocols)	Inefficient problem solving
Pairs (*2*) and Reflections	Self-absorbed, inflated sense of self-worth
Conventional Form (*X* + *%*)	Conventional and realistic perceptions
Distorted Form (*X* − *%*)	Distorted perceptions of reality
Affective Ratio (*Afr*)	Withdrawal from, or overresponsiveness to, affect
Form-Color (*FC*)	Emotional control
Populars	Conventional modes of thinking
Diffuse Shading (*Y*), *sum of Y*	Anxiety, constrained expression of emotion
Texture (*T*)	Need for affection and dependency
WSumC	Emotional control
Morbid Content (*MOR*)	Pessimism, negative self-image
WSum6	Cognitive distortion or slippage
Lambda	Emotional responsiveness
Pure Human	Empathy, interest in people
Aggressive Movement (*AG*)	Aggressiveness, hostility
Aggressive Content (*AgC*)	Aggressiveness, hostility
Color (*C*)	Emotional control
Vista (*V*)	Self-critical introspection
Space (*S*)	Difficulty in handling anger, negativism
Adjusted *es*	A chronic condition involving overstimulation (e.g., racing thoughts) and difficulty organizing thoughts
Blends	Ability to perceive complexity
Depression Index (DEPI)	Depression
Adjusted *D*	A person's typical capacity to tolerate stress (minus the influence of current environmental stressors)
D score	Current capacity to tolerate stress
Coping Deficit Index (CDI)	Interpersonal skills
Achromatic Color (*C′*)	Constrained emotional expressiveness

The adult CS normative sample was recently revised after Exner was told that he had made an error of large magnitude. Of the 700 protocols in the 1993 adult normative sample, 221 were duplicates (Exner, 2001, p. 172; J. E. Exner, personal communication, March 23, 2001). That is, the sample of 700 protocols was actually composed of 479 distinct protocols, with 221 protocols counted twice.

Although the adult normative sample has been revised, even the 2001 sample has not been found to be error free. Compelling evidence exists that the CS norms for form quality are based on the wrong scoring rules and have been seriously in error since 1983 (Meyer & Richardson, 2001). Form quality refers to how well a client's responses are related to the form of an inkblot. A disturbed client may disregard the form of an inkblot when creating a response.

By comparing a client's Rorschach scores with the CS norms, one should be able to detect psychopathology. If a client's scores differ from those for a group of relatively normal individuals, one should be able to infer that psychopathology is present. However, research evidence suggests that the use of the CS norms causes psychologists to overperceive psychopathology. In many ways, this problem raises perhaps the most serious question to date regarding the Rorschach's clinical utility. Because the results on norms are important for clinical practice, we describe them in detail here.

In a landmark study (Shaffer, Erdberg, & Haroian, 1999), the Rorschach was administered to 123 "nonpatient" adults. CS rules for administration were followed. Participants did not have a major medical illness, had never had a psychiatric hospitalization, had not received psychological treatment in the past 2 years, were never convicted of a felony, and had not undergone psychological testing in the past year. On many important Rorschach variables, participants obtained scores that were substantially different from the CS norms. Nearly all the discrepancies tended to make the participants appear pathological. For example, if one used the CS norms, one would conclude that the participants were probably seriously disturbed on measures of perceptual inaccuracy and distorted thinking. For Distorted Form ($X - \%$), the mean score for the Shaffer et al. sample was more than 2 standard deviations higher than the mean score listed for the CS norms (0.21 vs. 0.07). For Conventional Form ($X + \%$), the mean score for the Shaffer et al. sample was more than 3 standard deviations lower than the mean score listed for the CS norms (0.51 vs. 0.79).

Negative findings have also been reported for the CS norms for children (Hamel, Shaffer, & Erdberg, 2000). Hamel et al. administered the Rorschach to a group of relatively healthy children. Three children were excluded because they had received psychotherapy for emotional or behavioral disorders, 5 were excluded because they had been evaluated or treated for attention-deficit/hyperactivity disorder, and 1 child was excluded because of a history of having been suspended from school more than once. The children included in this study ($N = 100$) demonstrated healthier than average behaviors, as measured by the Conners' Parent Rating Scale–93 (Conners, 1989). When the Rorschach was administered, striking discrepancies from the CS norms were obtained. As noted by Hamel et al. (2000):

> If we were writing a Rorschach-based, collective psychological evaluation for this sample, the clinical descriptors would command attention. In the main, these children may be described as grossly misperceiving and misinterpreting their surroundings and having unconventional ideation and significant cognitive impairment. Their distortion of reality and faulty reasoning approach psychosis. These children would also likely be described as having significant problems establishing and maintaining interpersonal relationships and coping within a social context. They apparently suffer from an affective disorder that includes many of the markers found in clinical depression. (p. 291)

To determine if discrepancies from the CS norms can be found in other samples, Wood, Nezworski, Garb, and Lilienfeld (2001a) reviewed Rorschach studies that included groups of nonpatient adults. In these studies, a clinical group (e.g., clients with an anxiety disorder) was compared with a control group (a nonpatient comparison group). The nonpatient adult comparison groups were often composed of undergraduate students or community volunteers, although other groups were used as well (e.g., "normal married women"). Thirty-two studies were located. For the nonpatient comparison groups, the results for the following 14 CS variables were examined: EB style (percentage of ambitent protocols), Reflection responses, Conventional Form ($X + \%$), Distorted Form ($X - \%$), Affective Ratio (*Afr*), Form-Color (*FC*), Populars, sum of Diffuse Shading (*sum of Y*), sum of Texture (*sum of T*), *WSumC*, Morbid Content (*MOR*), *WSum6*, Lambda, and Pure Human. These 14 indexes were selected because they (a) are crucial to CS interpretation, (b) exhibited substantial discrepancies from the CS norms in the study by Shaffer et al. (1999), and (c) had been examined repeatedly in the 32 studies. For all 14 scores, the nonpatient adults appeared to exhibit significant psychopathology when their results were compared with the CS norms. All differences were statistically significant. The median difference between the comparison groups and the CS norms was large in size ($d = .73$).[2] Wood et al. (2001a) concluded the following:

> If Rorschach scores for a normal adult are interpreted using the CS norms, the adult will appear relatively self-focused and narcissistic (elevated Reflection scores), unconventional with impaired judgment and distorted perceptions of reality (low $X + \%$, low Populars, high $X - \%$), depressed, anxious, tense, and constrained in emotional expression (elevated *MOR*, elevated *sum Y*, low *WSumC*), insecure and fearful of involvement (elevated Lambda), vacillating and inefficient (elevated number of ambitents), with low empathy (low *Pure H*), a tendency to withdraw from emotions (low *Afr*), and poor emotional control (low *FC*). (p. 356)

Some psychologists have argued that the use of the CS norms does not lead to the overperception of psychopathology. For example, Meyer (2001b) analyzed the results from nine international CS studies that involved a total of 2,125 nonclinical participants. Instead of analyzing the results for the 14 variables that we examined, he analyzed the results for 69 Rorschach scores. He found that the international sample was only about four tenths of a standard deviation more impaired than the CS normative sample. Wood et al. (2001b) requested Meyer's (2001b) data and analyzed the results for the 14 variables that they had examined in their

[2] A median value of $d = .73$ indicates that for the median comparison, the mean for the clinical group was .73 of a standard deviation from the mean for the comparison group.

review. The findings for the international sample were remarkably similar to the findings that had been obtained for the aggregated sample of nonpatient participants in 32 studies. For the 14 variables, the international sample was about eight tenths of a standard deviation more impaired than the CS normative sample. Thus, for these 14 critical variables, the results are even more striking for the international sample than for the aggregated nonpatient sample.

The controversy concerning the CS norms is important because it suggests that psychologists using the Rorschach have been systematically overperceiving psychopathology. With regard to forensic practice, it is troubling to realize that the use of the CS norms may contribute to detrimental outcomes, such as a parent being unfairly denied child custody or a prisoner being denied parole. Implications for clinical practice are also important. Some psychologists may have been treating clients for problems they did not have (e.g., narcissism). Worse yet, in some cases, they may have persuaded clients that they had problems they did not really have. However, these errors may be less likely to occur when the Rorschach is used as an aid for exploration in psychotherapy rather than as an assessment device (Wood, Garb, Lilienfeld, & Nezworski, 2002), a point that we address later.

In conclusion, empirical evidence indicates that the use of the CS norms leads to the overperception of psychopathology. This result has been consistently obtained across well-designed studies conducted by independent investigators. When a client's scores deviate significantly from the CS norms, one should not necessarily infer that psychopathology is present.

Application to Case History

Although Dr. B appeared pathological when his Rorschach scores were compared with the CS norms, he does not appear pathological when his scores are compared with results obtained by researchers other than Exner. For example, Dr. B had a score of 4 on the Rorschach Experience Actual (*EA*). According to the Exner (1993, 2001) norms, such a score is abnormally low, and according to Weiner (1998, p. 140), "individuals in whom $EA < 6$ usually have limited coping resources and are more likely than most people to meet life's demands in an inept and ineffective manner." Using the Exner (1993, 2001) norms, one would infer that Dr. B is over 2 standard deviations below the mean score for normal adults. However, according to the findings of researchers other than Exner, an *EA* score of 4 is not abnormal. For example, in their sample of nonpatient adults, Shaffer et al. (1999) found that *EA* had a mean of 6.26, with a standard deviation of 3.71. Using samples of older adults, one would also conclude that an *EA* score of 4 does not reveal psychopathology. Paul (1989) reported a mean of 4.82 ($SD = 3.37$) among nonpatients who were 65–94 years old. Erstad (1996) reported a mean of 4.56 ($SD = 3.13$) for elderly normal adults who were 61–95 years old. As may be seen, many of the normal adults in these studies would be described as abnormal if their Rorschach results were interpreted using the CS norms.

Projective Techniques and the Assessment of Psychopathology

Clinical Guideline 2: Use scores that are valid for their intended purposes. Scores should be validated in well-designed studies, results should be consistent, and positive findings should be replicated by independent investigators.

It is often argued that projective techniques should be used as part of a test battery and that results from the testing should be integrated with history and interview information. This practice is seen as a safeguard: Conventional wisdom dictates that psychologists should weigh test results only if they are in agreement with other results (or, perhaps, only if they make sense in the context of other results).

An alternative view is that psychologists should use projective techniques only if indexes have been shown to be valid for their intended purposes. According to this argument, one should not use an invalid test score even if results for this test score are in agreement with findings from other sources of information. If projective results are in agreement with other results, such as interview and test results, then the projective results will tend to make psychologists more confident in their judgments, even if the projective indexes are not valid for this task. If the projective results are not in agreement with other information, psychologists may believe that hypotheses generated by using the other information have not been confirmed, even though invalid projective indexes should not have an effect on their judgments.

In research studies, psychologists have frequently become less accurate when projective test information has been made available in addition to other information, although decreases in accuracy have not always been statistically significant (Garb, 1998). For example, in one study (Whitehead, 1985), psychologists and advanced graduate students made diagnoses using (a) the MMPI alone, (b) the Rorschach alone, and (c) the Rorschach and MMPI together. The CS was used to administer, score, and interpret the Rorschach. Judgment tasks were to differentiate (a) back pain patients from psychiatric hospital patients with diagnoses of schizophrenia or bipolar disorder, (2) depressed back pain patients from nondepressed back pain patients, and (3) psychiatric patients with bipolar disorder from psychiatric patients with schizophrenia. When the results for psychologists and advanced graduate students were pooled across judgment tasks, the average hit rates were 76% for the MMPI alone, 58% for the Rorschach alone, and 74% for the Rorschach and MMPI together. Differences between psychologists and advanced graduate students were not statistically significant.

Research on using projective techniques to make diagnoses and describe symptoms is presented next. In light of this research, additional comments will be made about the case history of Dr. B.

Research on the Assessment of Psychopathology

To evaluate the validity of an index, we have proposed using the following criteria: (a) An index must demonstrate a consistent relation to a particular disorder, trait, or symptom; (b) results must be obtained in methodologically adequate studies; and (c) findings must be independently replicated (Wood et al., 1996b). We acknowledge that isolated positive findings have been obtained for a wide range of projective indicators. This result is not surprising given the enormous number of studies conducted on projective techniques. However, using our criteria, the existence of positive findings is not sufficient to result in a recommendation unless those findings are from sound studies and have been replicated by other researchers.

With regard to the Rorschach, results show that there are problems with using the CS to assess psychopathology. Only a few CS indexes appear to be well supported (Lilienfeld, Wood, & Garb, 2000). Poor form quality and deviant verbalizations can be used to detect thought disorder. They can also provide helpful information for the diagnosis of schizophrenia and other mental disorders in which thought disorder is sometimes present (e.g., bipolar disorder, schizotypal personality disorder). In addition, the Rorschach Oral Dependency Scale (Masling, Rabie, & Blondheim, 1967) has been reasonably well supported for the assessment of dependent personality traits.

In general, unique patterns of results on the Rorschach have not been observed for specific mental disorders. Investigators have searched with little success for Rorschach indexes that show a clear relation to major depressive disorder, anxiety disorders, dissociative identity disorder, conduct disorder, psychopathy, and dependent, narcissistic, and antisocial personality disorders. Positive findings that have been obtained have rarely been replicated (Wood, Lilienfeld, Garb, & Nezworski, 2000). For example, the Depression Index (DEPI; Exner, 1991, 1993) has been the most extensively studied Rorschach indicator of depression. According to Exner (1991, p. 146), an elevated score on the DEPI "correlates very highly with a diagnosis that emphasizes serious affective problems." However, independent investigators have generally reported that diagnoses of depression are not significantly related to scores on either the original or revised versions of the DEPI (for a detailed review, see Jorgensen, Andersen, & Dam, 2000). This is true for both adults and adolescents. For example, six of eight studies conducted independently of the Rorschach Workshops found no significant relation between the revised DEPI and psychiatric diagnoses (Archer & Krishnamurthy, 1997; Ball, Archer, Gordon, & French, 1991; Caine, Frueh, & Kinder, 1995; Meyer, 1993; Ritsher, Slivko-Kolchik, & Oleichik, 2001; Sells, 1990/1991; see also Meyer, 2001a), one study yielded mixed results (Ilonen et al., 1999), and only one study yielded unmixed positive results (Jansak, 1996/1997).

Some psychologists believe that Rorschach results can be used along with other diagnostic information to detect antisocial personality disorder (ASPD). For example, Gacono and Meloy (1994, pp. 108–117, 157–169) compared the CS norms with results for individuals with ASPD. They concluded that individuals with ASPD obtain distinctive and pathological scores on the Rorschach. However, their conclusions are highly problematic because we now know that many individuals in the community, with no known pathology, also score in a pathological direction when their scores are compared with the CS norms (Hamel et al., 2000; Shaffer et al., 1999; Wood et al., 2001a, 2001b).

Gacono and Meloy (1994) argued that a large number of Rorschach variables are related to ASPD. However, some of the studies that they cited compared the results for individuals with ASPD to the CS norms. This is a problem because even the results for relatively healthy individuals can be expected to differ from the CS norms. To learn if individuals with ASPD display a unique pattern of results on the CS, their results should be compared with results for nonpatient comparison groups. If one excludes the studies that compared results with the problematic CS norms, it becomes clear that no Rorschach variable (except perhaps Pair responses) has shown a well-demonstrated relationship to ASPD (Wood et al., 2000). Failures to replicate positive findings have been reported for the following scores: Aggressive Movement (*AG*; Baity & Hilsenroth, 1999; Berg, Gacono, Meloy, & Peaslee, 1994), *T* (Berg et al., 1994; Blais, Hilsenroth, & Fowler, 1998; Howard, 1998/1999), Aggressive Content (*AgC*; Baity & Hilsenroth, 1999; Berg et al., 1994), Color (*C*; Berg et al., 1994; Blais et al., 1998), Pure Shading Response (*Y*) and Vista (*V;* Gacono, Meloy, & Berg, 1992; Howard, 1998/1999), and Space (*S*) and Pure Human responses (Howard, 1998/1999). Similarly, attempts to replicate positive Rorschach findings for the assessment of psychopathy and conduct disorder have nearly always failed (Wood et al., 2000).

The Thematic Apperception Test (TAT), like the Rorschach, has infrequently been well supported for assessing psychopathology. For example, in one study (Sharkey & Ritzler, 1985), TAT measures of perceptual distortions, unusual story interpretations, and affect tone did not significantly distinguish samples of normal, depressed, and psychotic individuals. Furthermore, results have been only mixed for the most promising objective scoring system, the Social Cognition and Object Relations Scale (SCORS; Westen, Lohr, Silk, Gold, & Kerber, 1990). The SCORS was designed to assess object relations (i.e., a client's mental representation of other people), and it yields scores on several dimensions, including moral standards, aggression, and affect–tone. In one study that used the SCORS (Ackerman, Clemence, Weatherill, & Hilsenroth, 1999), patients with ASPD did not differ significantly from patients with other personality disorders on the moral standards variable. Similarly paradoxical results were found for the SCORS aggression variable. In contrast, research provides provisional support for using the SCORS to detect borderline personality disorder (e.g., Gutin, 1997; Malik, 1992; Westen et al. 1990).

Although research provides provisional support for using the SCORS to detect borderline personality disorder, clinicians should not conclude that these findings provide support for the routine clinical use of the TAT. Almost all clinicians who use the TAT rely exclusively on subjective interpretations and do not use an objective scoring system (Ryan, 1985; Vane, 1981). Subjective interpretations of the TAT are difficult to defend in light of the paucity of research support for their validity (Lilienfeld et al., 2001).

Human figure drawings are also used to help in assessing psychopathology. There are two major approaches to scoring and interpreting human figure drawings. Using the sign approach, one draws inferences from isolated drawing features. For example, if a client draws a small human figure, a clinician might infer that the person is likely to be depressed (an inference that is commonly made but is unlikely to be correct; Joiner, Schmidt, & Barnett, 1996). In contrast, the global approach involves basing a judgment on all of the features of a drawing. A number of reviewers have concluded that the sign approach typically yields inferences that possess negligible or zero validity (e.g., Kahill, 1984; Klopfer & Taulbee, 1976; Motta, Little, & Tobin, 1993; Thomas & Jolley, 1998). Results have been somewhat better for the global approach. For example, the Draw-A-Person: Screening Procedure for Emotional Disturbance (DAP:SPED; Naglieri, McNeish, & Bardos, 1991) has been normed on 2,622 children, ages 5–17, using U.S. Census data to stratify the sample on a number of demographic variables. It can be used as a screening measure for global psychopathology. In one study (Naglieri & Pfeiffer, 1992), the DAP:SPED was used to discriminate 54 normal students from 54

students with conduct and oppositional disorders. Cutoff scores suggested by Naglieri et al. (1991) were used to make discriminations. Validity was significantly better than chance, but the use of the DAP:SPED led to a large number of classification errors. Correct ratings were made for 77.8% of the normal participants and 48.2% of the clinical sample.

Our findings on projective techniques differ sharply from those reached by the Psychological Assessment Work Group (PAWG), which was commissioned by the Board of Professional Affairs of the American Psychological Association to address issues related to the declining popularity of psychological assessment (Kubiszyn et al., 2000). In a recent issue of this journal, PAWG concluded that the Rorschach and the TAT are valuable for the assessment of psychopathology. However, although PAWG consistently described positive findings for the Rorschach and TAT, they almost always omitted negative findings. The PAWG article did not mention the current controversy surrounding projective techniques or the problems with the CS norms.

In conclusion, one must be extremely cautious when using projective techniques to assist in assessing psychopathology. Research indicates that the Rorschach can be helpful for detecting conditions characterized by thought disorder (e.g., schizophrenia; see Wood et al., 2000). It is also supported for evaluating dependent personality traits. However, research does not support the Rorschach's use for diagnosing most mental disorders, including major depression, conduct disorder, panic disorder, and antisocial and narcissistic personality disorders. For the TAT, research provides provisional support for using the SCORS (Westen et al., 1990) to detect borderline personality disorder, but the validity of the TAT has not been well established for other tasks involved in the assessment of psychopathology. In particular, there is a scarcity of scientific support for the commonplace reliance on clinical intuition in TAT interpretation. Finally, with regard to projective drawings, there is some evidence that the DAP:SPED (Naglieri et al., 1991) can be used to screen for mental disorders among children, but the overwhelming majority of human figure drawing signs appear to possess negligible or essentially zero validity (e.g., Thomas & Jolley, 1998).

Application to Case History

The psychologist who administered the Rorschach to Dr. B used a computer program to interpret the results. The computer printout specified the scores on which different interpretive statements were based.

Rorschach scores that formed the basis for the negative characterization of Dr. B have received little support in the research literature. For example, Dr. B was described as "overly complex in his cognitions and personality functioning." This assertion rests on Dr. B's high Adjusted *es* score and his high number of Blends. Exner (1993) did not cite a single study to support the validity of Adjusted *es* (pp. 379–380). Regarding the number of Blends, Exner (1993) presented no research evidence that Blends are related to overcomplexity in cognitions or personality functioning (pp. 140–145, 501–504). The hypothesis that Blends are related to overcomplexity is apparently based exclusively on Exner's own authority.

One of the most damaging comments made about Dr. B in the psychologist's report was that he is "easily overwhelmed by external stress secondary to the excess of internal stress which characterizes him." This statement seems to be based on the following scores: the DEPI, Adjusted *D*, *D* score, Coping Deficit Index (CDI), Achromatic Color (*C'*), and Texture (*T*). We have already cited negative findings for the DEPI. With regard to the *D* score and the Adjusted *D*, two broad problem areas have been noted (Kleiger, 1992; Wood, Nezworski, & Stejskal, 1996a; but also see Exner, 1992). First, about half of the studies are unpublished. Second, the findings of the published studies are equivocal. For example, Kleiger (1992, p. 293) noted that some data (Exner, 1974) are described in an "incomplete" and a "confusing manner," making it difficult to determine if Exner's conclusions for these variables follow from his data. Also, the results of a published study (Wiener-Levy & Exner, 1981) had been interpreted as providing support for the validity of the *D* score and the Adjusted *D*, even though those results contradicted results from earlier studies (Exner & Bryant, 1975, 1976). Finally, very few studies have been conducted on the relation between stress and *C'*, *T*, and the *CDI*. For the few studies that have been conducted, the results have generally been negative. For example, Frueh and Kinder (1994) reported that Vietnam veterans with posttraumatic stress disorder did not differ significantly from normal male undergraduates on *T*.

Detection of Physical and Sexual Abuse

Clinical Guideline 3: Do not use the Rorschach, TAT, or human figure drawings to detect child physical or sexual abuse.

One of the most controversial tasks in personality assessment involves using psychological tests to detect physical or sexual abuse. This issue is discussed here because of its obvious social and clinical importance.

PAWG concluded that the "Rorschach or the TAT" are capable of "differentiating patients who have experienced physical or sexual trauma from those who have not" (Kubiszyn et al., 2000, p. 121). However, they did not cite any research to support their conclusion about physical abuse and cited only one study to support their claim about sexual trauma (Leifer, Shapiro, Martone, & Kassem, 1991).

Although PAWG cited only one study on the detection of child sexual abuse, West (1998) located 12 studies in which projective techniques had been used for this purpose. She conducted a meta-analysis and concluded that "projective techniques have the ability to discriminate between children who have been sexually abused and those who were not abused sexually" (p. 1151).

The meta-analysis conducted by West (1998) is seriously flawed. Although it was never made explicit in her article, West included only positive results in her meta-analysis. She excluded negative results even when they were reported in the same articles as the positive results. Thus, only by excluding negative results was West able to conclude that projective techniques are valid for the detection of child sexual abuse.

Data from the 12 studies located by West (1998) were reanalyzed (Garb, Wood, & Nezworski, 2000). All of the data, not just the positive findings, were entered in a meta-analysis. With regard to results, the overall effect size (*d*) was estimated to be between .35 and .46, indicating that the mean score for sexually abused children was about .35–.46 of a standard deviation from the mean score for nonsexually abused children. The following conclusions were reached (Garb, Wood, & Nezworski, 2000):

> Clinicians should not use test indicators until positive findings have been replicated by independent investigators. Most of the positive findings on detecting sexual abuse have not yet been replicated. There have been a few exceptions involving the Rorschach and Human Figure Drawings, but even these indicators are in need of further study because the findings that were replicated involved comparisons between sexually abused children and children who were not being seen by a mental health professional. (p. 166)

Thus, even the few indicators with positive results may not be useful for discriminating sexually abused children from children likely to be seen in a mental health clinic.

Similar results were obtained in a second meta-analysis (Garb, Wood, & Lilienfeld, 2000). This meta-analysis was broader in scope and included results from unpublished manuscripts. With the exception of Westen et al.'s (1990) TAT SCORS, no evidence was found that a projective technique indicator could consistently discriminate sexually abused children from nonabused children who are receiving mental health treatment. Although the use of the SCORS to detect sexual abuse is promising and we encourage additional research on its use, it is important to note that adequate normative data are not available. Also, results for the SCORS have varied widely across mental health settings, suggesting that separate cutoff scores will need to be established for individual sites.

In conclusion, the use of projective techniques for the detection of child physical and sexual abuse can be harmful. If a psychologist incorrectly concludes that a child has been physically or sexually abused, or incorrectly determines that a child has *not* been abused, these erroneous decisions may cause considerable suffering and pain for the child and the child's family as well as for other persons. We are particularly concerned that the use of the Rorschach will lead psychologists to make inaccurate and harmful judgments. As noted earlier, many normal children appear maladjusted when their results are compared with the CS norms. A child may score in a pathological direction because the CS norms are flawed, not because the child has been sexually or physically abused.

The Need for Flexible Standards

Clinical Guideline 4: Use projective techniques differently depending on whether one is testifying in court as an expert witness, evaluating a client in clinical practice, or using a projective technique as an aid for exploration in psychotherapy.

Standards for forensic practice are more rigorous than standards for clinical practice. Similarly, standards should be more rigorous for conducting a psychological evaluation than when using assessment information as an aid for exploration in psychotherapy. Psychologists should only use indexes that have been supported by research, but they can be relatively liberal or conservative in making interpretations depending on the setting (forensic vs. clinical) and the task (formal evaluation vs. generating material for psychotherapy). For example, when using a projective technique as an aid for exploration in psychotherapy, a psychologist may want to discuss an interpretation with a client that is based on the findings from a well-designed study even though the findings have not yet been replicated by an independent investigator. The psychologist should not assume that the interpretation is correct but instead should use this as an opportunity to explore an important issue with the client.

Rigorous standards require that interpretations be based on strong empirical evidence. For this reason, expert witnesses in legal settings should expect to be challenged if they (a) use the current CS norms, (b) interpret scores that are not valid for their intended purposes, or (c) use the Rorschach, TAT, or human figure drawings to help detect child physical or sexual abuse.

In psychotherapy, a tentative, exploratory approach can be beneficial. In fact, Aronow (2001, p. 384) recommended that the Rorschach be used "as part of the therapy process, particularly when logjams in the therapy are encountered. " However, when using projective techniques to generate material for therapy sessions, psychologists must be careful not to fall prey to confirmatory bias (Garb, 1998). That is, in addition to considering information that confirms an interpretation, psychologists must weigh information that serves to refute it.

Additional Recommendations and Guidelines

Perhaps the greatest pitfall to be avoided when using projective techniques is accepting the validity of the CS at face value (Exner, 1991, 1993, 2001). As already discussed, use of the CS norms for interpreting Rorschach protocols can lead psychologists to conclude that relatively normal individuals have severe psychopathology. Also, as illustrated in our discussion of the case history, some CS variables have negligible or essentially zero validity for their intended purposes. Thus, psychologists who interpret Rorschach protocols "by the book" are likely to make incorrect and potentially harmful inferences.

With regard to the CS, professional psychologists are left in a difficult predicament. One cannot expect clinicians to become familiar with the research literature on every CS variable. Their schedules will not permit it. But neither can they simply accept the validity of CS scores at face value.

In contrast to the CS, a number of textbooks that serve as interpretive manuals for the MMPI–2 have been written by authors who have been willing to adopt a critical stance. For example, Greene (2000) was critical of over half of the MMPI–2 supplementary scales. Consider the following statements from his book:

> There is virtually no research on the *Es* [Ego Strength] scale on the MMPI–2. The inconsistent findings in the earlier research may have dissuaded most researchers from investigating the scale. (p. 227)

> Clinicians should be very cautious in using the *MAC* [MacAndrew Alcoholism] scale in nonwhite ethnic groups. (p. 230)

> Research on the *O-H* [Overcontrolled–Hostility] scale has been very mixed. (p. 246)

> Research on the *Do* [Dominance] scale has been exceedingly sparse. (p. 248)

> There has been virtually no research on the *Re* [Social Responsibility] scale. (p. 249)

> Research on the *Mt* [College Maladjustment] scale is almost nonexistent. (p. 250)

> [Post Traumatic Stress Disorder Scales] are measures of general distress with little specificity for Post Traumatic Stress Disorder (p. 253)

> Any method using the MMPI–2—whether it involves single scales, profile analysis, Supplementary scales, or item analysis—appears disappointing in the prediction of suicide. (pp. 266–267)

This type of interpretive manual, one that adopts a genuinely critical attitude, is sorely needed for the CS.

How should information from projective techniques be integrated with other information to make judgments and decisions about clients?[3] In addition to providing guidelines for the use of the Rorschach, TAT, and human figure drawings, we describe the Washington University Sentence Completion Test (WUSCT; Loevinger, 1998) and make recommendations for its use. Although the Rorschach, TAT, and human figure drawings are the most commonly used projective techniques, the WUSCT is arguably the most extensively validated one (Lilienfeld et al., 2000).

Our primary recommendations for conducting formal psychological evaluations are as follows. First, to detect emotional disturbance among children, psychologists can conduct interviews with children, teachers, and/or parents. If a screening instrument is needed, they can use the Child Behavior Checklist (Achenbach, 1978; Achenbach & Edelbrock, 1983) or the DAP:SPED (Naglieri et al., 1991). It should be noted, however, that the Child Behavior Checklist has greater empirical support than the DAP:SPED.

For making diagnoses, psychologists should rely primarily on interview and history information, but results from psychological tests, including self-report personality inventories and projective techniques, can sometimes be helpful. For example, when diagnosing a severe mental disorder, one may find it helpful to assess for the presence of thought disorder. Using the Rorschach, one can do this by detecting deviant verbalizations and evaluating the form quality of responses. However, as already noted, serious problems exist with the CS norms for form quality and deviant thinking, such as *X* + %, *X* − %, and *WSum6*. To overcome this problem, one can use the Thought Disorder Index for the Rorschach (Solovay et al., 1986), although it is not part of the CS. One can also use the CS form quality variables but rely on local norms collected in one's work setting, but this is an imperfect solution because one will still not have norms for individuals in the community who are not impaired.

To assist with the diagnosis of borderline personality disorder, one can use the SCORS (Westen et al., 1990) to score and interpret a client's TAT protocol. The SCORS dimensions have demonstrated encouraging construct validity for the diagnosis of borderline personality disorder (Lilienfeld et al., 2000), but they are difficult to score. Also, adequate norms are not available. This makes it difficult to use the SCORS in clinical practice because clinicians will not know what cutoff scores to use.

To predict behavior, psychologists should rely heavily on history and interview data. It may also be possible to use projective techniques to predict certain behaviors of relevance to clinical and counseling psychologists. The Rorschach Prognostic Rating Scale (RPRS; Klopfer, Kirkner, Wisham, & Baker, 1951) has been used for the prediction of psychotherapy outcome, and the McClelland, Atkinson, Clark, and Lowell (1953) TAT scoring system for assessing achievement needs has been used to assist in the prediction of occupational success. However, little research has been conducted on the RPRS since the early 1980s, up-to-date norms are not available, and some investigators have argued that the extant research is of poor methodological quality (Hunsley & Bailey, 1999, p. 274; Shields, 1978). Also, neither of these indexes can be scored easily by clinicians (e.g., the RPRS requires that the Rorschach be administered and scored using the now rarely employed Klopfer system). Moreover, the correlations between McClelland et al.'s scoring system for achievement motivation and real-world achievement are relatively low (Spangler, 1992).

To evaluate psychiatric symptoms and personality traits, clinicians should rely on interview and history information, brief self-rated and clinician-rated measures (e.g., measures of panic frequency and severity), self-report personality inventories, and, in selected instances, projective techniques. Assessing symptoms and personality traits is supposed to be the ideal task for projective techniques. However, even for this task, the findings for the Rorschach, TAT, and human figure drawings have rarely been independently and consistently replicated. One exception involves using Rorschach indexes to evaluate thought disorder. Another involves the use of the Rorschach Oral Dependency Scale. This measure can be used to detect dependency, although it is not known if its addition to interview and history information leads to an increase in validity. This index is not currently part of the CS.

In contrast to other projective techniques, the WUSCT (Loevinger, 1998) has been extensively validated for evaluating personality. The WUSCT consists of 36 incomplete sentence stems (e.g., "Sometimes she wished that . . ."). Separate forms are used for male and female participants. The test has been well-validated as a measure of ego development (e.g., Lilienfeld et al., 2000, pp. 55–56; Manners & Durkin, 2001). It can be used to evaluate a range of traits, including impulse control, moral development, cognitive style, interpersonal style, and conscious preoccupations. However, some questions remain unresolved. The test has infrequently been used in clinical practice, and research needs to be conducted to demonstrate its utility for this purpose. For example, research can determine if the WUSCT provides helpful information for diagnosing personality disorders.

In conclusion, from a scientific standpoint, the use of projective techniques is highly controversial. Although they can be used appropriately and should continue to be the subject of research, there are significant problems with the manner in which they are at times used. In general, psychologists will be on safer ground when they use projective techniques as an aid for exploration in psychotherapy rather than as an assessment device. The PAWG report's conclusions notwithstanding, psychologists would be well advised to proceed with great caution when using these instruments in clinical and forensic practice.

[3] Because we focus on the valid use of projective techniques, a discussion of objective personality tests is beyond the scope of this article.

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