Chapter 10

Projective Techniques

Chapter Questions

- What are some of the key issues in the debate over whether and how projectives should be used in clinical assessments?
- What are some of the strengths and limitations of the clinical and psychometric approaches to interpretation of projectives?
- How would viewing projective techniques from either a traditional projection approach or as a behavioral sample influence the type of technique that would be used and the interpretations that would be made?
- What are the basic interpretive strategies for inkblot techniques, thematic techniques, sentence-completion techniques, and projective drawing techniques?
- What are some specific examples of administration, scoring, and interpretive systems for each type of projective technique?

The Controversy Surrounding Projective Techniques

No type of assessment has engendered as much controversy as projective techniques. For some, projectives are synonymous with personality testing and provide some of the richest sources of clinical information on children and adolescents (Hughes, Gacono, & Owen, 2007; Rabin, 1986; Weiner, 1986). For others, projective techniques typically

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do not meet even the minimum of basic psychometric standards, and their use, therefore, detracts from the assessment process and tarnishes the image that psychological testing has with other professionals and with the general public (Anastasi, 1988; Gittelman-Klein, 1986; Hunsley & Bailey, 2001). In Box 10.1, we have attempted to summarize some of the major arguments made on either side of this debate.

Our philosophy in writing this chapter was not to espouse either of the strong views on projective testing. Instead, our goal was to provide the reader with an overview of this method of assessment that would allow for an informed view of the appropriate role of projective techniques in clinical assessments. Too often in the past the debate over projectives has focused on ideological arguments, or even on personal beliefs, without a critical and scholarly examination of the actual issues involved. Therefore, the first part of this chapter focuses on what we feel are the major issues in the use of projectives that determine *whether* they should be used and *how* they should be used in clinical assessments.

Irrespective of one's eventual stand on the projective controversy, projective techniques remain one of the most commonly used methods of clinical assessment by psychologists in general (Watkins, Campbell, Neiberding, & Hallmark, 1995) and by child psychologists specifically (Hojnoski, Morrison, Brown, & Matthews, 2006). This fact is

Box 10.1

The Projective Debate

Pro	Con
Less structured format allows clinician greater flexibility in administration and interpretation and places fewer demand characteristics that would prompt socially desirable responses from an informant.	The reliability of many techniques is questionable. As a result, the interpretations are more related to characteristics of the clinician than to characteristics of the person being tested.
Allows for the assessment of drives, motivations, desires, and conflicts that can affect a person's perceptual experiences but are often unconscious.	Even some techniques that have good reliability have questionable validity, especially in making diagnoses and predicting overt behavior.
Provides a deeper understanding of a person than would be obtained by simply describing behavioral patterns.	Although we can at times predict things we cannot understand, it is rarely the case that understanding does not enhance prediction (Gittelman-Klein, 1986).
Adds to an overall assessment picture.	Adding an unreliable piece of information to an assessment battery simply decreases the overall reliability of the battery.
Helps to generate hypotheses regarding a person's functioning.	Leads one to pursue erroneous avenues in testing or to place undue confidence in a finding.
Non-threatening and good for rapport building.	Detracts from the time an assessor could better spend collecting more detailed, objective information.
Many techniques have a long and rich clinical tradition.	Assessment techniques are based on an evolving knowledge base and must continually evolve to reflect this knowledge.

not cited to defend their use. It is cited simply to indicate that projective techniques are a firmly entrenched part of the clinical assessment process that shows no signs of changing in the near future.

Clinical Technique or Psychometric Test?

Much of the debate over the use of projective techniques comes from a confusion as to the most appropriate criteria with which to judge the usefulness of projectives. Traditional methods of evaluating psychological tests are grounded in measurement theory, which, as was discussed in Chap. 2, relies primarily on indexes of the reliability and validity of the scores that result from the test (Anastasi, 1988). When evaluated on these terms, most projective techniques have not fared well (Hunsley & Bailey, 2001). As Rabin (1986) states:

> "An aspect of projective tests that is not to be overlooked is the frequent disappointment and disaffection with the adequacy, reliability, and validity of several projective methods. The psychologist, reared in the atmosphere of respect for science and for the psychometric purity of his instruments, often finds them wanting" (p. 8).

One way in which these criticisms have been addressed has been through the development of standardized administration, scoring, and interpretive procedures for certain projective techniques which are designed to provide scores that meet traditional psychometric standards (Weiner, 2001). Two examples of such approaches that are frequently used for testing children and adolescents are the Rorschach Comprehensive System (Exner, 1974) and the Roberts Apperception Test for Children (McArthur & Roberts, 1982). Both of these approaches to projective testing are discussed in more detail later in this chapter. However, it is important to note that both systems share the goal of providing very clear and explicit guidelines on how the tests are to be given, scored, and interpreted. Such standardization is a prerequisite to further psychometric evaluation.

This method of addressing the criticisms of projective tests has not met with unanimous approval. Instead, it has been argued that projective tests should not be evaluated by traditional measurement theory and that any attempt at standardization will limit the clinical utility of the technique. For example, Haak (1990) has argued that:

> "The problem with all of these standardization efforts is the amount of destruction they wreak on the essential nature of projectives. All such approaches result in a huge loss of the rich and complex information that is obtained by using the technique in the first place" (p. 149).

This argument is based on the contention that projectives are part of the older clinical tradition that seeks to describe the individual person in depth, capturing all of his or her unique dispositions, motivations, conflicts, and desires. This is an idiographic approach that is not concerned with how the individual differs from the norm or how his or her scores compare to those of some other reference group (e.g., those with diagnoses of depression). Instead, the goal is simply to understand the person's unique qualities. In this conceptualization, "validity" takes on a very different meaning than the one that is typically used in measurement theory. One is not concerned with how a score compares to some objective criterion outside the person being tested.

For some psychologists this clinical approach might seem unscientific. However, all clinicians rely on intuition at some point in an evaluation to understand the nuances of an individual case. Our science of human behavior is not at a point

where every clinical decision can be guided by well-established principles, and, given the complexity of psychological functioning, such pure empiricism may never be possible. Therefore, the clinical view of projectives considers these techniques as a structured way of obtaining these intuitions. By using this structure, one can use the judgments of other experienced clinicians as a guide to making interpretations.

The importance of understanding this debate is not to decide which view is right. What is more crucial is for one to recognize the two disparate ways of using projective techniques and the unique strengths and weaknesses of both. For example, using projectives as a psychometric technique allows one to compare a person's score with those from a normative group, or with those from some relevant clinic group, or with some other clinically important criterion (e.g., response to treatment). However, to use the scores in this way, one must maintain rigorous standardization in procedures and be willing to live within the confines of the data that are available. A frustrating aspect of clinical assessments is realizing the limitations of what our assessments can provide.

On the other hand, using projectives as a clinical tool allows one greater flexibility in administration and interpretation. However, with this flexibility, the interpretations that result from the assessment are much more susceptible to influences that are indiosyncratic to the assessor. Interpretations of the same case material may vary widely across clinicians. As such, interpretations should be clearly viewed as *clinical impressions* and not be evaluated in the same way as empirically derived interpretations. In Box 10.2 we have provided a more detailed discussion of the importance of clearly defining one's approach to projective assessment and then recognizing the limitations inherent in either method.

Projection or Behavioral Sample?

Even more basic than the debate over the method of interpretation is confusion over what psychological processes projective techniques are supposed to measure. The critical nature of this question is obvious from a psychometric viewpoint. Validity is the critical property of a test and it is often defined as evidence that the test is measuring what it is supposed to measure (Anastasi, 1988). Therefore, if it is unclear what a test is supposed to measure then it will be unclear as to what are the most appropriate methods of determining its validity.

One dominant view of projective tests, which is the view that led to the name *projective*, is best described by Murray (1943): "There is the tendency for people to interpret an ambiguous human situation in conformity with their past experiences and present wants" (p. 1). This forms the basis of the *projective hypothesis*. The projective hypothesis rests on the assumption that people, in the absence of clear environmental demands, will project basic aspects of themselves in their interpretations of environmental stimuli. Freudian theory, which dominated clinical psychology for decades, heavily emphasized unconscious conflict as the basic element of human personality. Projection is seen by many as being a window to these unconscious dynamics (Rabin, 1986).

However, there is a second view of projectives. Rather than seeing them as windows to hidden or unconscious motives and drives, many assessors view projectives as *a behavioral sample*. For example, Knoff (1983) writes:

> "A student completes an incomplete sentence blank with '*I* hate myself' or '*My* father beats me up all the time,' and these hypotheses are confirmed through self-injurious behavior or a physically abusive father, is this a hidden aspect of personality? Or how is a student's

Box 10.2

Two Approaches to Projective Testing: You Cannot Have It Both Ways

The divergent approaches to the interpretation of projectives can be descriptively labeled as the psychometric approach and the clinical approach. The problem that arises in the use of projectives is that many clinical assessors aren't aware of the approach that they are using and therefore, do not recognize the limitations of their approach. To put it bluntly, many assessors want the best of both worlds. They want the flexibility and the rich clinical information afforded by the clinical approach, but they do not want to recognize the potential biases in interpretation that are inherent in such usage. In contrast, many psychologists have found new promise in projective assessments with the advent of standardized administration and scoring procedures for some techniques. However, users of these systems are frustrated by the limited and often confusing data-bases on which to base interpretations and often slip back into making interpretations that are better considered clinical intuitions. In this box we provide two examples of the confusion resulting from these differing approaches to interpretation.

In the clinical tradition, interpretations are based on clinical judgment and experience. This is often considered bad practice, but we feel that such clinical intuition is unavoidable and even desirable in any assessment enterprise. The problem arises when users fail to recognize the potential unreliability of their clinical judgments. In fact, justification for their interpretation is often based on research on the Exner Comprehensive System for Rorschach interpretation, which has demonstrated acceptable levels of reliability for many scores (Hiller et al., 1999). Unfortunately, they use this argument to justify the reliability of *any* interpretation they make from the Exner system or to justify the reliability of their interpretations from *any* projective technique. This latter practice would be analogous to assuming that all self-report measures of anxiety have the same psychometric properties and therefore can be interpreted in the same way.

A second example comes from a common practice in using one of the newer standardized systems, like the Exner system for Rorschach interpretation. Psychologists have enjoyed the increase in reliability that such systems provide and which sets the stage for more empirically based interpretations. However, studies have not always been able to show empirical support for some of the interpretations that have been well established in the clinical tradition (Carter & Daccy, 1996; Finch & Belter, 1993; Stredney & Ball, 2005). This has led some to the conclusion that the richness of the Rorschach record is simply too complex for current methodology (Finch & Belter, 1993). This implies that the scores cannot be tested adequately with current research methodology. Because of this fact, these authors and others have recommended that one should use both the psychometric *and* clinical method of interpretation of Rorschach when using the Exner system.

The problem arises when assessors make a clinical interpretation that does not have empirical support but place undue confidence in this interpretation because they are using a "reliable and valid system." This goes back to a basic psychometric principle. Tests or interpretive systems are not themselves reliable and/or valid. The individual interpretations that one makes from them can be reliable and/or valid. Unfortunately, the Exner system, like most of the interpretive systems for the projective techniques, encourages interpretations based on the clinical tradition, some of which have been supported in research and others of which have not garnered much research support. Users then are often unaware of the basis of their interpretations.

response to a thematic approach which uses real photographs depicting significant interpersonal situations (i.e., peer group acceptance, attitudes toward school-work, reactions to new sibling) different from an interview question asking how she/he is getting along with peers on the playground?" (p. 448).

It is evident from this quotation that one can view responses to projective tests as samples of behaviors from which one would like to generalize to behaviors in other situations, outside of the testing environment. In fact, this type of interpretation underlies Rorschach's original development of the inkblot test and has been the guiding principle for Exner's more recent system of interpretation. Rorschach, and later Exner (see Exner & Martin, 1983; Exner & Weiner, 1994), describe the inkblot tests as a "perceptual test," meaning that a person's perception of the inkblot is used as a sample of behavior with which to generalize to the person's perception of other, more clinically relevant, stimuli.

These two competing views of what is measured by projectives have several important implications for the assessment process. As already mentioned, how one views the process will determine what evidence is used to establish the test's validity. For example, if one views the test as a behavioral sample, then one would want evidence that the behaviors obtained from the test are associated with behaviors outside the testing situation. Alternatively, if one views projectives as tapping unconscious conflicts, then the relationship to overt behavior is not expected to be one-to-one, because the same conflicts can be manifested in different behaviors (Koppitz, 1983). In this case, validity would be best established by showing that responses on a projective technique are associated with other indicators of unconscious conflicts.

Implicit in this discussion is the important point that the way one views the psychological process that is being measured by projective tests will determine the types of interpretations that will be made from a child's or adolescent's responses. A person viewing the results in terms of projection will make interpretations about drives and motivations. It is these types of predictions that one wishes to make. In contrast, a person viewing the results in terms of a sample of behavior will make interpretations about behavioral tendencies that are likely to be manifested in situations outside of the testing situation. For example, if the Rorschach is used as a sample of perceptions, one would wish to make predictions about how these perceptual tendencies will be manifested in other situations.

The final impact of viewing projective techniques as either projection or a behavioral sample is its influence on the selection of the type of stimulus used. Specifically, if one is operating from the projective hypothesis, one would want as ambiguous a situation as possible. For example, the Thematic Apperception Test (Murray, 1943) contains a blank card that has no picture on it and the person is required to make up a story about this card. This is an example of a very ambiguous situation with few demand characteristics, or very little stimulus pull, that would guide a person's response. This stimulus allows for the purest form of projection.

In contrast, if one wishes to obtain a behavioral sample from the projective technique, high levels of stimulus pull may actually be beneficial. If one knows the demand characteristics that promoted the response, then one would have some clue as to what situations one might generalize (i.e., ones with similar demand characteristics). For example, cards from the Roberts Apperception Test for Children (McArthur & Roberts, 1982) were designed to pull for specific themes (e.g., peer conflict, school problems, marital discord in parents). This is not a desirable property from the pure projection viewpoint because it increases the demand characteristics of the stimulus and thereby limits the degree of projection required.

Summary

Our approach to the debate over the use of projective techniques is that assessors should use or not use projective testing

based on a careful consideration of critical assessment issues. Assessors are often unclear about what approach to measurement they are using (i.e., clinical or psychometric), and often make inappropriate interpretations based on this confusion. Further, assessors are often unclear about what they are trying to measure with projectives, and again, this leads to confusion in interpretations or to the selection of a technique that is not well-suited for their purpose. The rest of this chapter will highlight characteristics of specific projective techniques. However, these general issues are paramount in understanding and using these techniques; therefore, these issues are revisited throughout this chapter with reference to specific techniques.

Inkblot Techniques

One of the most commonly used projective techniques is the ink-blot technique. The stimulus is simply an inkblot, and the child is asked to interpret this ambiguous stimulus in some way. The best known of the inkblot techniques, the Rorschach, consists of ten cards with standardized inkblots. Although the Rorschach is often considered synonymous with inkblot techniques, a notable alternative is the Holtzman Inkblot Technique (HIT). This technique was developed to overcome psychometric limitations in the Rorschach by constructing a completely new set of inkblots (Holtzman & Swartz, 2003). The HIT consists of two parallel forms, each of which contains 45 inkblots.

Volumes have been written on the different interpretive systems for inkblot techniques for children (e.g., Ames et al., 1974; Exner & Weiner, 1994; Holtzman & Swartz, 2003). The primary variations among these systems are along the dimensions discussed in the introduction to this chapter: whether the inkblot test is viewed as a projective approach or as a behavioral sample, and whether a clinical or psychometric approach to interpretation is taken. Rather than giving a superficial overview of the different approaches to interpretation, we will focus on one of the most commonly used methods of interpretation for children: Exner's Comprehensive System (ECS) for Rorschach interpretation. This system attempts to integrate five major approaches to Rorschach interpretation into a single Rorschach approach (Exner & Martin, 1983). Even limiting our focus to one system of interpretation does not allow us to do justice to the intricacies of Rorschach interpretation using the ECS; accordingly, the reader is referred to Exner and Weiner (1994) for a more in-depth discussion of this system of interpretation for assessing children and adolescents.

The Exner Comprehensive System for Rorschach Interpretation

Process Measured

The ECS treats the Rorschach as *a perceptual-cognitive task*. When viewed in this way:

> "The Rorschach becomes a task to which people respond by exercising their perceptual-cognitive abilities and preferences. To articulate their answers, they must select parts of these variegated stimulus fields to which they wish to attend, use some mixture of the features of the stimulus and their own needs to guide formulations, and identify objects that will give substance to their impressions. In short, they decide how to scan the stimulus, how to translate the stimulus input, and what to report" (Exner & Weiner, 1982, p. 3).

Weiner (1986) outlines four basic factors that influence a child's response to the inkblot. First, the nature of the stimulus itself may lead the child to classify a blot

in a certain way. Although the inkblots were designed to minimize stimulus pull, there are clearly some common or typical answers that are based on the specific features of the blots. Second, responses may be influenced by concerns about making a particular impression which could lead to some censoring of responses in a socially desirable manner. Third, responses are influenced by personality traits that predispose a person to perceive the blots in idiosyncratic ways. Fourth, responses are partly a function of situational psychological states that affect a person's perceptual experience. Each of these factors provides an important context for interpreting a child's response to the Rorschach inkblots.

Administration and Scoring

In contrast to the complexity of Rorschach interpretation, administration of the task is relatively simple. The subject is handed the individual cards with the inkblot stimuli and merely asked, "What might this be?" The only unacceptable response is, "It's an inkblot." If the child provides this answer, then he or she is encouraged to see it as something it's not. All ten cards are administered in this way, and the subject's responses during this *free association phase* are recorded verbatim for later scoring. After the child responds to all ten cards, the examiner enters the *inquiry phase*. The assessor readministers each card and reads to the child his or her initial responses. The child is instructed to show the examiner which part of the blot led to the response and what made him or her think it looked that way. The child is informed that the assessor would like to see it "just the way you did" and several standardized prompts are provided (e.g., "What in the blot makes it look like that to you?" Exner & Wiener, 1994). The child's responses during this inquiry phase are also coded verbatim to use in later scoring.

The heart of the ECS is the extensive and detailed scoring procedure of a child's test protocol (i.e., verbatim responses to Rorschach cards). This system includes approximately 90 possible scores. There are seven major categories of codes, which are described in Table 10.1: Location, Determinants, Form Quality, Organizational Activity, Popularity, Content, and Special Scores. The ECS utilizes a Structural Summary, which shows all of the possible scores, plus various summary scores that are ratios, percentages, and other derivations of the individual scores that provide important information for interpretation.

Norming

The best normative data on the Exner system come from a large (n = 1,870) nationwide sample of children between the ages of 5 and 16 (Exner & Weiner, 1994). At each age in this 12-year age range, there were at least 105 children. There was also fairly equal gender representation at each age, and the inclusion of minority children was at a proportion that approximated national census data. The only weakness evident in this normative data base was the overrepresentation of children from higher socio-economic strata (Exner & Weiner, 1994). From this normative sample, Exner and Weiner (1994) documented several age-related trends in scores. These trends are summarized in Table 10.2. Users of the ECS with children should be aware of these developmental changes in the Rorschach responses and interpret scores within a normative perspective.

The extensive normative database for children available with the ECS aids in such interpretations. This normative base is one of the major reasons for the popularity of the ECS for use with children. However, it is important to note that the adequacy and consistency of the normative scores across different samples of children and adolescents has been questioned (Hunsley & DiGiulio, 2001; Meyer, Erdberg, & Shaffer, 2007).

TABLE 10.1 Summary of Scores Used in Exner's Comprehensive System to Rorschach Interpretation

Categories	Description	Examples of Scores
Location	Part of the blot used by respondent	W = Whole blot D = Common area Dd = Uncommon Area S = White space
Determinant	Features of the blot that contributed to the formation of the response	F = Form C = Color T = Texture/Shading M = Human Movement
Form Quality	Measures the perceptual accuracy of the response (i.e., does the area of the blot really conform to the child's perception)	+ = Superior–overelaborated 0 = Ordinary–common U = Unusual–rare but easy to see - = Minus-distorted, arbitrary, and unrealistic
Content	Places into categories the various persons, places, and things that form the child's response	H = Whole Human An = Anatomy Bl = Blood Fi = Fire Fd = Food Hh = Household items
Popular	Codes the number of times the child gave a high-frequency (very common) response to a blot	P = Number of popular responses given in the entire protocol
Organizational Activity	Provides an estimate of the efficiency of a child's organization of the stimulus field	Z score = Higher scores indicate greater organizational effort
Special Scores	Denotes unusual verbal material in a child's response	INCOM = Incongruous Combination-merges details or images in unrealistically way MOR = Morbid-response includes references to death or clear dysphoric feeling AG = Aggressive Movement-response includes action that is clearly aggressive

Reliability

Because of its explicit and standardized administration and scoring procedure, it is not surprising that the ECS has proven to be more reliable than many other inkblot interpretive systems, showing high inter-rater and high test-retest reliability (Hiller et al., 1999). For example, in a sample of 25 8-year-old children, one-week test-retest coefficients for individual and summary

TABLE 10.2 Age Trends in the Normative Data for the Exner Comprehensive System for Rorschach Interpretation

Score	Age Trend
Length of Record	Younger children tend to give fewer responses than older children. Protocols of less than 17 are not uncommon before age 15 and records of more than 25 are unusual prior to age 13.
Location	Younger children (less than 11) give more responses that include the whole blot rather than a specific area. More children, and especially very young children, give at least one response that uses an infrequently identified area of the blot.
Developmental Quality	Younger children frequently give many vague responses in which diffuse impressions of the blot or blot area are given without clearly articulating specific outlines or structural features. Such vague responses account for one-third of the responses of children ages 5, 6, and 7.
Movement Determinants	Younger children give few human movement responses. It is not unusual for the responses of 5-, 6-, and 7-year-olds to have few or none such determinants, whereas it is uncommon for this to occur after age 11.
Chromatic Color Determinants	It is not uncommon for children to give color responses that are *not* created based on the form features of the blot. The presence of such pure color responses is often interpreted as indicative of poor affective regulation. About 70% of 5-year-olds, 35% of 8-year olds, 23% of 12-year olds, and 8% of 16-year olds give at least one pure color response.
Form Dimension	Answers that include the impression of depth, distance, or dimensionality increase with age such that, by age 8, they appear at least once in over half of all subjects' records.
Reflection Responses	In contrast to responses of adults, images reported as reflections or mirror images, because of the symmetry of the blot are quite common in child protocols. Such responses appear in about half of the protocols of children under the age of 8. Although the incidence of such responses declines over time, they are still found in about 25% of the protocols of 15-year olds.
Popular Responses	There is a steady increase in the number of popular responses with age, with adolescents giving approximately one-third more popular responses than children under age 8.
Special Scores	Many of the special scores that document unusual verbalizations and cognitive slippage are more common in young children than in adolescents and adults

scores ranged from $r = .49$ to $r = .95$, with a mean coefficient of $r = .84$ (Exner & Weiner, 1994). In fact, the only coefficient to drop below $r = .70$ was the coefficient for Inanimate Movement ($r = .49$).

Validity and Interpretations

While Rorschach scores are reliable over short time intervals, the stability of the scores over longer periods is lower than the stability of adult scores. Specifically, Exner, Thomas, and Mason (1985) tested 57 children at 2-year intervals from age 8 to 16. In general, most scores showed only moderate consistency over each two-year interval until the interval between the ages of 14 and 16. Some notable exceptions were the fairly stable coefficients for the use of good form, the use of popular responses,

the number of active movement responses, and the use of shading features for making depth and dimension responses.

The modest stability of Rorschach scores is not unique to this type of assessment, but is characteristic of most assessment techniques in children (e.g., McConaughy, Stanger, & Achenbach, 1992). In fact, this is probably a positive attribute of the scores because it suggests that the scores capture the rapid developmental changes experienced by children and adolescents. However, there is a tendency to equate Rorschach responses with personality assessment, and to equate personality with stable dispositions. These findings on the low stability of Rorschach scores clearly argue against making strong dispositional statements based on a child's Rorschach protocol.

One common use of the ECS has been to assess childhood depression. Exner (1983) initially developed a Depression Index (DEPI) based on six scores from a child's protocol. Unfortunately, the DEPI, based primarily on research in adults, showed very poor agreement with other measures of depression in children, which led Exner to revise the DEPI (Exner, 1990) in an effort to increase its correspondence with other measures of depression. Tests of the revised DEPI index have also failed to find consistent associations with other measures of depression (Archer & Krishamurthy, 1997; Ball et al., 1991; Carter & Dacy, 1996). These findings could be a function of inadequate methods of assessing childhood depression in general, which results in the failure to have an appropriate standard with which to judge the Rorschach. Alternatively, Weiner (1986) has argued that the Rorschach: "is a measure of personality processes, not diagnostic categories… it can help to identify forms of psychopathology only to the extent that they identify personality characteristics associated with the types of disorder" (p. 155). However, these findings suggest that users of the DEPI from the ECS should not expect the scores to be highly related to other indexes of depression.

An even more extreme caution is in order for the Suicide Constellation for Children, a set of scores based on an index used to assess for suicidal tendencies in adults (Exner, 1978). The suicide constellation was developed by selecting the eight best predictors of suicide from the ECS in a small sample (n = 39) of children who had attempted or committed suicide within fewer than 60 days after the Rorschach was taken (Exner & Weiner, 1994). Unfortunately, the predictive validity of this index has not been replicated in other samples, making the interpretation of this index questionable at present (Allen & Hollifield, 2003).

Another common use of the Rorschach is in the detection of cognitive and perceptual irregularities that could be associated with schizophrenia (Weiner, 1986). Exner and Weiner (1994) outline four sets of Rorschach scores that can aid in this detection. First, disordered and illogical thought processes are the focus of several special scores in the Exner system. For example, the Incongruous Combination score identifies responses that condense blot details or images into a single incongruous percept in which the parts or attributes do not belong together: "a person with the head of a chicken" (Weiner, 1986, p. 217). Second, perceptual inaccuracies are suggested when the child has a protocol with many responses that do not correspond closely to the form structure of the blot (i.e., poor form quality) or protocols with few common or popular responses. Third, interpersonal inadequacies that are often associated with schizophrenia can be assessed in responses involving human movement. Movement responses with poor form quality are considered indicative of inaccurate or unrealistic interpretations of interpersonal situations (Exner & Weiner, 1994).

Fourth, the irregular content of a protocol, such as one with very violent (e.g., two boys stabbing each other in the chest) or very bizarre (e.g., flowers squirting poisonous gas) content can be considered suggestive of disturbed ideation that is often associated with schizophrenia.

Exner and Weiner (1982) reported data on 20 children (ages 9–16) reliably diagnosed with schizophrenia and 23 nonschizophrenic children. These data indicated that the use of these indexes produced a high correct classification rate (90.7%). These positive findings must be interpreted with three cautions, however. First, indicators of perceptual disturbances for the Rorschach have not always shown high correlations with other behavioral indicators of thought disorders (Smith, Baity, Knowles, & Hilsenroth, 2001). Second, while these indexes appear to be correlated with a diagnosis of schizophrenia, it is unclear how much utility these indexes possess over the actual behavioral symptoms of the disorder (Gittelman-Klein, 1986). In other words, there is no evidence to suggest that children who show elevations on these indexes, but who do not show overt behavioral manifestations of the disorder, are at risk for developing schizophrenia. Second, Gallucci (1989) studied a sample of 72 intellectually gifted children and found elevated rates on these indexes, compared to age norms, but no other signs of maladjustment in the children. Intellectually superior children may process the Rorschach stimuli in nonconventional ways, but these differences should not be considered indicative of a psychotic process. Similarly, Holaday (2000) reported that children and adolescents diagnosed with post-traumatic stress disorder also reported significantly higher scores on the Rorschach indicators of schizophrenia. Thus, indicators of schizophrenia on the Rorschach appear to have a high rate of false-positives for thought disorders (i.e., many children score high who do not have other indicators of psychosis).

Evaluation

These examples are only a small sample of the common uses of the ECS in clinical assessments of children and adolescents. However, these examples illustrate two issues that are important for using the Rorschach in the assessment of children and adolescents. In general, Rorschach responses do not typically correspond closely to behaviorally based diagnoses; therefore, use of the Rorschach for diagnostic purposes is not recommended. Second, many of the Rorschach scores and indexes were developed and validated on adults. Unfortunately, the extension to children has not met with great success, as is evident from studies on the Children's Depression Index and Suicide Constellation of Children. Therefore, users should be wary about using adult-oriented systems for interpreting the Rorschach responses of children.

Thematic (Storytelling) Techniques

The second type of projective technique for children is the storytelling or thematic approach. In this technique a child is shown a moderately ambiguous picture or photograph and asked to tell a story about it. For example, the instructions to the Roberts Apperception Test for Children (McArthur & Roberts, 1982) are:

> "I have a number of pictures I am going to show you one at a time. I want you to make up a story about each picture. Please tell me what is happening in the picture, what led up to this scene, and how the story ends. Tell me what the people are talking about and feeling. Use your imagination and remember that there are no right or wrong answers for the picture" (p. 7).

Thematic tests have been a popular type of projective technique with children because

the storytelling format is usually nonthreatening and fun for them. However, it does require a significant level of verbal ability in the child.

There are many different thematic techniques that have been used with children and adolescents, which vary in the types of pictures that are used to promote children's stories (see Kroon, Goudena, & Rispens, 1998 for a review). One of the most commonly used techniques for children and adolescents is the Thematic Apperception Technique (TAT; Murray, 1943). The TAT consists of 31 cards with black-and-white pictures of primarily adult figures involved in some relatively ambiguous action or interaction. Because the TAT was designed primarily for use with adults and contained adult pictures, the Children's Apperception Test (CAT; Bellak & Bellak, 1949) was developed especially for children. The original CAT contains ten cards with pictures depicting animal figures, although a later CAT-H was developed with human figures. The pictures on both the CAT and the CAT-H were designed to elicit typical childhood conflicts that are predicted from psychodynamic theory (e.g., sibling rivalry, oedipal urges, toileting concerns). Another thematic test heavily influenced by psychodynamic theory is the Blacky Picture Test (Blum, 1950). The Blacky Picture Test consists of 11 cartoons whose central figure is a dog named Blacky. Like the CAT, the pictures were designed to depict psychosexual conflicts common in children.

Two apperception tests, the School Apperception Method (Solomon & Starr, 1968) and the Michigan Picture Test-Revised (Hutt, 1980), were designed more specifically for use in educational settings. Another apperception test designed specifically for use with children is the Roberts Apperception Test for Children (RATC; McArthur & Roberts, 1982). The RATC is quite explicit in the themes assessed by the stimulus pictures. Unlike many other thematic techniques, the themes the pictures were designed to assess are not specific to psychodynamic theory. Also, the RATC is one of the few thematic techniques that includes an explicit scoring system. The RATC is reviewed in greater detail later in this chapter.

Several thematic approaches have specific sets of pictorial stimuli for specific groups of children. This is based on research showing that children provide greater verbalization on thematic apperception techniques when the stimulus material more closely matches their ethnicity, gender, and age (Constantino & Malgady, 1983). For example, the TAT and RATC contain some pictures that are gender-specific and the RATC contains supplementary pictures depicting African American children (McArthur & Roberts, 1982). Of particular note, the Tell-Me-A-Story technique (TEMAS: Constantino, Malgady, & Rogler, 1988) is a thematic apperception test that was specifically designed to be a culturally sensitive test for inner-city children and adolescents. The TEMAS involves 23 brightly colored cards depicting inner-city themes involving peer and family interactions. There are 11 sex-specific cards and two parallel sets for minority (depicting Hispanic and African-American characters) and nonminority children. Also, unique to the TEMAS are separate norms for Caucasian, African-American, Puerto Rican, and other Hispanic children across three age groups (5–7, 8–10, 11–13). However, these norms are based on a rather limited sample (n = 642) of children from public schools in New York City (see Flanagan & DiGiuseppe, 1999).

General Interpretation of Thematic Techniques

One important issue in the use of thematic techniques is the lack of standardized administration or scoring procedures for

most systems. Of the 12 thematic apperception tests used for children and adolescents reviewed by Kroon et al. (1998), only 5 had standardized and objective methods of scoring children's responses. For example, assessors administering the TAT often select certain cards to administer. Further, there are many different systems for obtaining scores but most assessors do not use any systematic scoring system. Given the lack of consistency in administration and scoring, it is not surprising that evidence for the reliability and validity of thematic techniques is limited. Thematic techniques are often interpreted within an idiographic or clinical tradition in which clinical impressions of an individual child are obtained through an analysis of the child's stories.

Clinical interpretation of a child's story is typically based on two broad aspects of a child's response. The first step is *a process* interpretation. In this part of the interpretation, one notes such characteristics of the stories as how elaborate the stories were, whether the stories were coherent and tied to the stimulus card, and whether there were any specific cards for which the child had difficulty formulating a story. This type of interpretation can be used to determine how invested the child or adolescent was in the assessment process, whether there were any potential disturbances or idiosyncrasies in thought processes, and whether there were any specific types of stimuli that elicited defensive reactions from the child.

The second part of the interpretive process is a *content* analysis. Children's stories are typically analyzed for (1) the characteristics of the hero or main character (e.g., motives, needs, emotions, self-image), (2) forces that affect the hero in his or her environment (e.g., rejection by peers, punitiveness from parents, frightening forces, support by parent, affection from sibling), (3) the coping or problem-solving strategies used by the hero (e.g., aggression, compromise, nurturance), and (4) the outcomes of the story (e.g., positive or negative, outcomes brought about by hero or someone in his or environment, outcomes are realistic). The content analysis should determine whether there are any consistent themes in a child's story, especially themes that transcend the stimulus pull of a card. For example, an aggressive story provided for a card that shows two children fighting is less diagnostic than a story with an aggressive theme based on a picture of two people sitting next to each other in a park.

Roberts Apperception Technique for Children

The Roberts Apperception Techniques for Children (RATC; McArthur & Roberts, 1982) is one example of a thematic technique that was explicitly designed for use with children and is one of the few storytelling procedures with an explicit and standardized scoring system. This instrument illustrates some major components in the interpretive process of thematic techniques.

Content

The RATC is intended for use with children and adolescents of ages 6–15. There is a standard set of 27 stimulus cards depicting common situations, conflicts, and stresses in children's lives (McArthur & Roberts, 1982). Eleven cards have parallel male and female versions, and there is a supplementary set of stimulus cards featuring African-American children. A description of the RATC cards and the themes the cards were designed to elicit are provided in Table 10.3.

Administration and Scoring

The administration procedures of the RATC are quite simple (the instructions given to the child were provided earlier in this chapter). The RATC provides

TABLE 10.3 Depictions in the Stimulus Cards from the Roberts Apperception Test for Children

Card Number	Description	Common Themes
1 (B & G)	Both parents discussing something with child	Elicits themes of family confrontation and stories in which parents are giving advice or punishing a child
2 (B & G)	Mother hugging child	Elicits themes of maternal support and dependency needs in relation to a material figure
3 (B & G)	Child working on homework	Elicits themes related to child's attitude to school, teachers, tests, and homework
4	One child standing over another child in prone position	Elicits themes with aggression, accidents, and illnesses
5 (B & G)	Parents are shown in an embrace with child looking on	Elicits themes related to a child's attitude toward parental displays of affection
6 (B & G)	Two white children are shown interacting with a black child	Elicits themes related to peer interactions and racial attitudes
7 (B & G)	Child sitting up in bed awake	Elicits themes of anxiety and bad dreams
8	Both parents speaking to male and female child	Elicits themes related to family discussions, such as around discipline or planning a family activity
9	Child standing with clenched fists over a child sitting on the ground	Elicits themes related to peer aggression
10 (B & G)	Mother holding baby with child looking on	Elicits themes of sibling rivalry and attitudes toward the birth of a new sibling
11	Child cowering with hands in front of face	Elicits themes of fear and anxiety
12 (B & G)	Adult male glaring at a distressed adult female with child looking on	Elicits themes of parental conflict and parental depression
13 (B & G)	Child preparing to throw chair onto the ground	Elicits themes of anger and aggressive feelings
14 (B & G)	Child with paint on hands has put handprints on wall with mother looking on in distress	Elicits themes of maternal limit setting and child wrongdoing
15	Adult female in bathtub with male child looking through door	Elicits attitudes toward sexuality and nudity
16 (B & G)	Child and father in a discussion while father looks at a paper	Elicits themes of father-child relationships and paternal approval

Note: B & G = Separate cards for girls and boys.
Source: McArthur, D. S., & Roberts, G. E. (1982). *Roberts Apperception Test for Children*. Los Angeles: Western Psychological Service.

explicit instructions for scoring the stories provided by a child. Each story is scored on 16 coding categories. There are 8 Adaptive categories, 5 Clinical categories, and 3 categories labeled Indicators. A description of these categories is provided in Table 10.4. As evident from this box, the RATC coding categories are quite similar to traditional content areas used to interpret other thematic techniques. Scores used in interpretations from the RATC are the total number of times a given code was present across all stories. This allows one to determine consistent themes (high scores within a category) across stories.

Norming

One objective of the authors of the RATC was to develop a standardized scoring system so that normative data could be generated and used by other users of the system (McArthur & Roberts, 1982). The importance of age-specific normative data in the interpretation of projective tests was already discussed in the previous section on the Rorschach. Unfortunately, the normative data provided in the RATC manual are minimal. The normative sample on which norm-referenced scores are based consisted of 200 school children: 20 boys and 20 girls in the age ranges of 6–7 and 8–9 and 30 boys and 30 girls in the age ranges of 10–12 and 13–15. Not only is the size of the sample small, but its representativeness is also questionable. The sample was taken from three school districts in southern California. Although the manual states that an effort was made to select children from lower, middle, and upper socioeconomic family backgrounds (McArthur & Roberts, 1982), there is no evidence to show that this goal was met, nor is there any information given on the ethnic makeup of the sample. Finally, comparisons of scores from this normative sample to other non-referred samples of children have shown very different distributions of scores (Bell & Nagle, 1999). Therefore, the norm-referenced scores provided in the RATC manual are of questionable utility.

Reliability

A positive outcome of the explicit scoring system was an increase in reliability compared to other thematic approaches without standardized administration or scoring procedures. The manual reports that 17 doctoral-level raters averaged 89% agreement on three RATC protocols, and 8 master's-level clinicians reached 84% agreement. Evidence for the split-half reliability of the RATC was less impressive, however. Acceptable reliability (above .70) was found for only 6 of the 13 adaptive and clinical scales: Limit Setting, Unresolved, Resolution 2, Resolution 3, Problem Identification, and Support.

Validity and Interpretations

The increase in reliability afforded by the RATC scoring system has set the stage for the development of a database with which to judge the instrument's validity. However, the extent of this database is presently quite limited and the findings mixed. For example, the manual reported comparisons between 200 clinic-referred children and the 200 well-adjusted children in the standardization sample (McArthur & Roberts, 1982). In this broad test, all eight of the adaptive scales and all three indicators differed between the two groups. In contrast, the only clinical scale to show differences between groups was the Rejection scale. Thus, the clinical scales failed to differentiate maladjusted from well-adjusted children, which does not bode well for the likelihood of these scales accomplishing the more difficult task of differentiating types of problems within clinic-referred children.

TABLE 10.4 Profile Scales and Indicators from the Roberts Apperception Test for Children

Description of Scale	Purpose	Scoring Criteria
Reliance on Others (A)	Designed to measure the adaptive capacity to use help to overcome problem	Main character (1) seeks assistance for handling problem or completing tasks, (2) asks permission, or (3) asks for approval or material objects
Support-Other (A)	Reflects tendency to support others	Main character (1) gives object or does something requested or (2) gives emotional support or encouragement
Support-Child (A)	Measures self-sufficiency, maturity, assertiveness, and positive affect	Main character (1) shows appropriate self-confidence, assertiveness, self-reliance, perseverance, or delay of gratification or (2) experiences positive emotions
Limit Setting (A)	Measures the extent to which parent places reasonable and appropriate limits on child	Story describes some appropriate disciplinary action or constructive discussion following child wrongdoing
Problem Identification (A)	Measures child's ability to articulate problem situations	Character in story states a problem or obstacle or experiences contradictory feelings
Resolution-1 (A)	Measures child's tendency to seek easy or unrealistic solutions to problems	Story involves a situation in which a problem is solved without any clear mediating process or by some unrealistic or imaginary process
Resolution-2 (A)	Measures a child's tendency to use constructive resolutions to problems	Story involves constructive resolution of internal feelings, external problem, or conflicted interpersonal relationship; solution is limited to present situation without an explanation of the process involved in working through the problem
Resolution-3 (A)	Measures a child's tendency to use constructive resolutions to problems	Same as Resolution-2, except the story explains how the character worked through problem
Anxiety (C)	Measures a child's tendency to interpret situations as dangerous and fearful	Story involves (1) character showing apprehension, self-doubt, or guilt or (2) themes of illness, death, or accidents
Aggression (C)	Measures a child's aggressive impulses	Story involves angry feelings, physical or verbal attack, or destruction of objects
Depression (C)	Measures a child's tendency to depression	Story involves dysphoric feelings, giving up, or vegetative symptoms of depression

(Continues)

TABLE 10.4 (Continued)

Description of Scale	Purpose	Scoring Criteria
Rejection (C)	Measures issues that a child might have concerning separation and rejection	Story involves physical separation, rejection, dislike of another person, needs unmet by others, or racial discrimination
Unresolved (C)	Measures a tendency toward having an external locus of control or an inability to control one's emotions	Story involves an emotional reaction without a resolution
Atypical Response	Measures distortions in a child's thought processes or unusual ideation	Story involves a distortion of stimulus card, is an illogical story, involves homicidal or suicidal ideation/action, involves death, or involves child abuse
Maladaptive Outcome (I)	Measures poor problem-solving abilities or the presence of a pessimistic or hopeless cognitive style	Story involves characters that behave inappropriately to solve a problem or when the story ends with the main character dying
Refusal (I)	Measures a lack of investment in the task or extreme defensiveness to certain stimuli	Child refuses to respond or stops in the middle of a story and refuses to go on

Note: Descriptions of scoring criteria are not full criteria and should not be used in place of the explicit criteria provided in the RATC manual. Manual also provides concrete examples of each criterion. (A) = Adaptive scale, (C) = Clinical scale, (I) = Indicator.
Source: McArthur, D. S., & Roberts, G. E. (1982). *Roberts Apperception Test for Children*. Los Angeles: Western Psychological Services.

Evaluation

Because of the lack of validity evidence, the RATC should not be used in diagnostic decision-making, as is the case for other thematic approaches. Instead, the RATC should be used as a method of obtaining clinical impressions, with a consideration of all the strengths and weaknesses of this method of interpretation. However, unlike many other thematic techniques, the explicit scoring system of the RATC has led to a reliable scoring procedure that sets the stage for further validation to guide interpretations. Another caution in interpreting the RATC stems from the poor normative base from which norm-referenced scores provided in the RATC are derived (Bell & Nagle, 1999). These scores should he regarded as suspect until further information becomes available from larger and more representative samples of children and adolescents.

Sentence Completion Techniques

Another type of projective technique that is frequently used in the clinical assessment of children is the sentence-completion technique (SCT). The sentence-completion method involves providing the child, either orally or in writing, with a number of incomplete sentence stems such as, "My family is…" or "I am most ashamed of…." As is evident from these examples, the stimulus employed in sentence-completion techniques is much less subjective than the other projective methods reviewed in this chapter. That is, the sentence stems have a high degree of stimulus pull in prompting certain types of answers. As a result, many have debated whether sentence-completion methods should even be considered projective, given their more objective nature (Hart, 1986).

Although SCTs clearly require a different level of inference than other projectives, they probably are closer to other projectives in design and interpretation than to self-report rating scales. However, a decision as to whether or not to use an SCT in a clinical assessment goes back to our initial discussion of projective techniques in general. If one wishes to interpret projectives as a behavioral sample, then the objective nature of the SCT and the lower level of inference required is a distinct advantage. In contrast, if one wishes to enhance projection, then the strong stimulus pull of the SCT is less desirable.

To illustrate the diversity in how SCTs are used, Holaday, Smith, and Sherry (2000) surveyed a random sample ($n = 100$) of members of the Society for Personality Assessment and they obtained a 60% response rate to their survey. On questions related to why and how they used SCTs in their clinical practice; the only response endorsed by the majority of respondents (67%) was as "part of a more comprehensive assessment battery." A substantial minority were split in endorsing "to determine personality structure" (i.e., as a projective test) and in endorsing "as a structured interview" (i.e., as a behavioral sample) to describe their use of SCTs, with 30% and 25%, respectively, endorsing these uses. Interestingly, 28% endorsed the use "to obtain quotable quotes" as a justification for inclusion of SCTs in their assessment battery, suggesting that the information provided by the SCT is often used to obtain examples to illustrate findings from other assessment procedures (e.g., clinical diagnoses).

Features of SCTs

Content

Despite a common format, there are numerous SCTs available that vary in their content, length, complexity, and purpose. The Rotter Incomplete Sentence Blank

(Rotter & Rafferty, 1950) is one of the oldest and most common of the SCTs. It was originally developed for use with adults and consists of 40 items designed to elicit information on psychosexual conflicts. It is available in three forms, and the authors provide a quantitative scoring procedure that can be used to determine the degree of conflict present in each response. Another commonly used SCT is the Hart Sentence Completion Test for Children (HSCT). The 40-item HSCT was developed specifically for use with children, and the content was designed to elicit children's perceptions of family, peers, school, and self (Hart, 1986). There are numerous other SCT procedures that are beyond the scope of this chapter to discuss in detail (see Haak, 2003; Holaday et al., 2000 for reviews).

Administration

Administration of SCTs is straightforward and typically includes instructions which inform children that they are to complete the sentences in whatever manner they choose, and that there are no right or wrong answers.

There are three important dimensions on which the administration procedures of SCTs differ (Hart, 1986). First, SCTs and users of SCTs can differ on whether the sentence stems are to be read aloud to the child or adolescent or whether the child being assessed is to be asked to read the questions and respond privately. The choice of which administration format to use is partly a function of the child's reading level and age, with assessors tending to read sentence stems to children more often than to adolescents (Holaday et al., 2000). However, the verbal interchange that results from the reading of questions to a child can also provide an assessor with additional information (e.g., a child's affective response to a sentence stem, a child's apparent motivation toward the task) on which to evaluate his or her responses.

Second, some users of SCTs request that the child answer as quickly as possible by saying the first thing that comes to his or her mind in an effort to elicit spontaneous and unguarded responses. In contrast, other users attempt to promote deliberation by telling the subjects that they can complete the sentences in any way they like and that the purpose of the test is to better understand their *real* feelings. The first use of the SCT is typically preferred if the goal of administration is projection. The second administration procedure is typically preferred if the goal is to obtain a behavioral sample.

Third, SCTs differ in whether or not they include an inquiry process. In the inquiry phase, children are asked to explain their responses in more depth. This questioning helps the assessor determine why a child may have completed the sentence in a particular way. This information is especially useful for responses that are unusual, ambiguous, or diagnostically important (Hart, 1986). Because of the important clinical information obtained by this inquiry, it is often an integral part of the administration of SCTs for many assessors (Haak, 2003).

Interpretation

As with most projective techniques, there is great variability in how SCTs are scored and interpreted. Many SCTs do not have explicit scoring or interpretive guidelines and, even for those that do, many users do not follow them in practice. For example, of the 60 respondents from the survey of users of SCTs conducted by Holaday et al. (2000), only 17% of those respondents who said they use SCTs in the assessment of children stated that they score the test according to a manual or according to the authors' instruction, and 27% of those respondents who said they use SCTs with adolescents reported doing so. In fact, 25% of respondents did not even know

the name of the SCT that they used in practice and 13% reported that they write their own sentence stems to address their client's needs.

However, interpretation of SCTs typically relies on an analysis of the manifest content of a child's responses. As was the case with the thematic techniques, an assessor would analyze a child's response for consistent themes that might provide clues to the child's emotional adjustment or his or her perceptions of certain persons or situations. For example, positive responses to stems designed to assess perceptions of parents (My father is the best; What I like best about my father is he is nice) are thought to be an indication of a positive father-child relationship. This is an example of the low level of inference that is often applied to the interpretation of SCTs.

Some assessors also analyze the *process* of a child's responses, such as whether they are complex, whether they are perseverative, whether they are expressive and imaginative, and whether they are coherent and related to the sentence stem (Haak, 2003). This type of analysis can provide the assessor with insight as to how invested a child was in the task and some possible clues about a child's thought processes. Box 10.3 provides an overview of the most common approaches to interpreting responses on SCTs.

Evaluation

As is evident from the discussion of SCTs to this point, most systems do not have explicit and standardized administration, scoring, and interpretive procedures. These decisions are often left to the judgment of the assessor, who can be guided by the advice of the authors of the SCT or other experienced clinicians (e.g., Haak, 2003). As a result, most SCTs can be considered to fall in the clinical tradition of projectives, with most techniques failing to have well-established psychometric properties (Anastasi, 1988). Of particular concern is the lack of a normative base to guide the interpretation of SCTs in children and adolescents. Also, most SCTs were initially developed for adults, so the content is often inappropriate for children.

Drawing Techniques

A final popular approach to projective testing with children is through the interpretation of children's drawings. The popularity of drawing techniques in the assessment of children can be attributed to two factors. First, unlike other projective techniques that require substantial verbal ability often exceeding the capacity of some very young children, drawing techniques are primarily nonverbal. Second, most children are familiar and comfortable with drawing, so it is an enjoyable assessment context for a child. Koppitz (1983) writes:

> "Drawing is a natural mode of expression for boys and girls. It is a nonverbal language and form of communication; like any other language, it can be analyzed for structure, quality, and content" (p. 426).

From this description, it is evident that the interpretation of children's drawings is based on the same assumptions that underlie the interpretation of other projective approaches; namely, that drawings contain nonverbal clues and symbolic messages about a child's self-concept, motivations, concerns, attitudes, and desires (Cummings, 1986).

Knoff (2003) provides a general framework for administering and interpreting drawings. Specifically, administration involves two phases. During the performance phase, the child is provided with the necessary materials to complete the task (e.g., paper; crayons) and asked to draw

Box 10.3

Research Note: Interpretive Approaches to Sentence Completion Techniques

The author of the Hart Sentence Completion Test for Children (Hart, 1986) provided an interesting summary of various interpretive approaches to sentence completion techniques (SCTs) in the clinical assessment of children and adolescents.

Strategy 1

The most common interpretive approach to SCT is to review each item's content and obtain clinical impressions about a child's personality dynamics. The assessor searches for patterns, clues, and thought processes and generates hypotheses consistent with the assessor's view of human behavior. This approach often leads to different interpretations of the same set of responses by different clinicians. What is viewed as important or diagnostic will depend on the assessor's theoretical orientation.

Strategy 2

The next approach places sentence stems into clusters with similar item content that are judged to elicit similar psychological information. The assessor determines if there are important patterns of responses within a cluster of items. However, like the first strategy, the interpretations are heavily dependent on the assessor's orientation. Which items determine a meaningful cluster and what constitutes an important pattern of responses within a cluster are based on an assessor's theoretical orientation.

Strategy 3

The third approach is exemplified by the Rotter Incomplete Sentence Blank (Rotter & Rafferty, 1950) and is based on psychodynamic theory. Each response is analyzed according to the degree of intrapsychic conflict evident in the response. It is a quantitative scoring system in which the severity of the conflict is rated as negative, neutral, or positive.

Strategy 4

The fourth approach involves comparing responses on an SCT to some predetermined criteria. This approach attempts to limit the unreliability inherent in the other strategies by minimizing the reliance on the assessor's theoretical orientation. An example of this approach is the Hart Sentence Completion Test for Children (Hart, 1972). In a standardization sample, a large pool of responses was obtained for each sentence stem. The responses were placed into positive, negative, and neutral categories by expert judges. In each rating category, representative responses were identified for each sentence stem to aid assessors in making their determination of the valence of a child's response.

Source: Hart, D. H. (1986). "The Sentence Completion Techniques," in II. M. Knoff (Ed.), *The Assessment of Child and Adolescent Personality*, New York: Guilford.

specific pictures. During the inquiry phase, a series of questions are asked to clarify the persons and objects in the picture, to understand their actions and motives, and to have the child describe in more detail why he or she chose to draw the picture in the way he or she did. Both the drawing itself and the child's description of it are used to generate hypotheses about potential themes that may provide insight into the child's emotional (e.g., anxiety) and social (e.g., family relations) functioning.

Draw-a-Person Technique

One of the most popular drawing techniques for children is the Draw-a-Person Technique (DAPT), made popular by a seminal publication by Koppitz (1968). In this technique a child is simply given a

paper and lead pencil and asked to draw a picture of a whole person. It is left up to the child the type of person to be drawn (e.g., age, gender, race, context of figure). After finishing this first drawing, the child is given another sheet of paper and asked to draw another person of the opposite sex from the first drawing.

Koppitz (1968) provides one of the most explicit guides to interpreting children's figure drawings. She organizes her approach around three basic questions. The first question is, *How did the child draw the figure?* Such content analysis is the focus not only of the Koppitz system, but of most interpretive systems of children's drawing. In the Koppitz system, the figure is viewed as reflecting a child's self-concept. Koppitz developed a series of 30 Emotional Indicators (EI) that were rare in children's drawings, that were independent of age, and that differentiated undisturbed from maladjusted children. Examples of EI in the Koppitz system include poor integration of parts, slanting of figure by 15° or more, omission of mouth, body, or limbs, and monster or grotesque figures. Figure size is another EI that is not only a part of the Koppitz system, but is included in many interpretive systems and is considered to be a key indicator of a child's self-esteem. Small figures are interpreted as indicating low self-esteem (2 in. or less in height) and large expansive figures (9 in. or more in height) are interpreted as indicating high levels of self-esteem. Box 10.4 summarizes, in more detail, Koppitz's EI.

Box 10.4

Further Discussion of the Koppitz Emotional Indicators for Human Figure Drawings

As mentioned in the text, the writings of Koppitz (1968, 1983) have been quite influential in the interpretation of human figure drawings for children and adolescents. A key element to her projective interpretation of drawings is the presence or absence of 30 Emotional Indicators (EI). Koppitz's El were chosen based on (1) their utility in differentiating disturbed from nondisturbed children, (2) their low prevalence (less than 6%) in the drawings of nondisturbed children, and (3) their occurring independent of age.

The EIs can be divided into three broad categories: Quality Signs, Special Features, and Omissions

Quality Signs	Special Features	Omissions
Poor integration of parts	Tiny head	No eyes
Shading of face	Crossed eyes	No nose
Shading of hands & neck	Presence of teeth	No mouth
Asymmetry of limbs	Short arms	No body
Slanting figures	Long arms	No arms
Tiny figure	Arms clinging to body	No legs
Big figure	Big hands	No feet
Transparencies of major body parts	Hands cut off	No neck
	Legs pressed together	
	Genitals	
	Monster/grotesque figures	
	Multiple figures drawn spontaneously	
	Clouds	

(Continues)

Box 10.4 (Continued)

Koppitz explains that the EI are not scores but are clinical signs that may reveal underlying attitudes and characteristics of the child (Koppitz, 1983). There is evidence that the EIs occur at a greater frequency in the drawings of emotionally disturbed than nondisturbed children (see Finch & Belter, 1991). However, Koppitz describes the difficulty in interpreting EIs for the individual child:

> "There is no relationship between an EI and overt behavior. For instance, long arms and big hands both reflect aggressiveness and anger, yet children who show these two EI on their drawings may act very differently. One boy may reveal his anger by refusing to do his homework or by truanting from school, another child may be physically aggressive to peers, while a third child may withdraw and soil himself when angry. The Human Figure Drawings indicate that all three pupils are angry; the youngsters' behaviors demonstrate how they express this anger. It is also important to recognize that different EI can reflect the same attitude. Thus, a girl may show acute anxiety by shading the body and face of her Human Figure Drawing and by omitting the arms. When she makes another drawing some time later, she may omit the figure's nose and hands and may draw a dark cloud above the figure. Similarly, a single EI may have different meanings depending on the situation. For example, a tiny figure may reflect underlying timidity or shyness, or it may indicate withdrawal or depression. The true meaning of a given EI can only be determined by other aspects of the personality battery, from observing the child in different settings, and from studying his or her developmental and social background" (Koppitz 1983, p. 423).

The second question around which the Koppitz interpretation is organized is, *Whom does the child draw?* Most children tend to draw figures that are of the same gender as themselves (Cummings, 1986; Finch & Belter, 1993). Based on these findings, Koppitz considered a child's drawing an opposite-sex figure on his or her first drawing to be diagnostic, either of problems in gender identity or as a reflection of loneliness and isolation. There is also a tendency to view the figure as an indicator of the child's image of his or her own body (Cummings, 1986).

The final question in the Koppitz interpretive system is, *What is the child trying to express via the drawing?* A child's self-figure may reflect his or her self-perceptions, or a drawing of someone else may reflect attitudes or conflicts toward this person. Koppitz notes that a child's drawing may (1) be a reflection of a child's wish, fantasy, or ideal; (2) be an expression of real attitudes or conflicts; or (3) be a mixture of both. To help clarify this issue, many assessors note either a child's spontaneous verbalizations about a figure or ask the child to tell a story about the figure. As noted above, the assessor may follow up with an inquiry phase in which he or she asks specific questions about the figure such as, Who is he/she? or Whom were you thinking about while you were drawing? or What is he/she thinking about? or How does he/she feel?

House–Tree–Person

A second projective drawing technique is the House-Tree-Person (HTP) technique (Cummings, 1986). In this technique the child is asked to draw a house, a tree, and a person. The order is always the same and the drawings are done on separate sheets of paper. After the drawing, children are

asked a series of questions to give them an opportunity to describe and interpret the objects that were drawn (Cummings, 1986; Koppitz, 1983). According to one of the originators of the HTP technique, the three figures give insight into different facets of a child's functioning (Hammer, 1958). The house is thought to elicit feelings associated with the child's home situation and familial relationship. In contrast, the tree is thought to elicit deeper and unconscious feelings about the child and his or her relationships with the environment. Unlike the self-portrait, the tree is thought to have less pull for conscious self-descriptions and therefore to involve a greater level of projection. And, finally, the drawing of a person is thought to reflect more of a conscious or semiconscious view of the child's self, the child's ideal self, or a significant other.

Kinetic Family Drawing

A third common projective drawing technique that is used in the assessment of children and adolescents is the Kinetic Family Drawing. In this technique a child is asked to "Draw a picture of everyone in your family, including you, doing something" (Burns & Kaufman, 1970, p. 5). These instructions emphasize the family engaging in some activity, hence the term *kinetic*. As was the case for the HTP technique, there is an inquiry phase in which a child is asked to describe and explain his or her drawing (Cummings, 1986). The first part of the inquiry typically involves the child explaining who each figure is (e.g., name, relationship to the child, age). The child is then asked to describe all the figures, what they are doing in the picture, how they are feeling, and what they are thinking about. After these initial descriptive questions, the child is asked to tell a story about the drawing, saying what happened immediately before the actions depicted in the drawing took place and what happens next. Finally, the child is asked to describe anything that he or she would change about the picture if he or she could.

The popularity of the KFD lies in its ability to assess a child's perceptions of his or her family in a fun and nonthreatening way. Burns and Kaufman (1970) outline a three-part interpretive process that is heavily dependent, not just on the drawing, but on the inquiry phase that follows. The first part of the interpretive process is the analysis of the actions portrayed in the drawing. They not only refer to the movements between people but the energy (e.g., avoidance, conflict, nurturance) and emotion (e.g., love, anxiety, anger) captured in the picture. The next part of the interpretive process deals with the style of the family drawing. Style refers to the patterns of interactions among significant family members and often reflects a child's defense system (e.g., denial, isolation). The final stage of the interpretation is the symbolic interpretation, which is analogous to the content interpretations of other projective drawing techniques.

Psychometric Cautions for Drawing Techniques

As with most other projective techniques, the best method of validating projective drawings has been hotly debated. In a review of the psychometric properties of drawing techniques, Cummings (1986) found that the lack of explicit scoring and interpretive guidelines for projective drawings has caused most systems to have poor reliability. Even for those systems in which high reliability estimates have been obtained, correlations between drawings and other measures of a child's adjustment have not been consistently shown (Joiner, Schmidt, & Barnett, 1996). Most studies have found that clinicians are unable to distinguish clinically identified children from nonclinical controls using projective

drawings. Of great concern is the use of projective drawings to detect child sexual abuse. Summaries of this research have not been able to find indicators from drawings that have consistently and reliably differentiated abused from non-abused children across multiple samples (Garb, Wood, & Nezworski, 2000).

This inability to demonstrate the validity of projective drawings has led some authors to suggest that the use of drawings in clinical assessments of children is unethical (Martin, 1983). This strong stance has sparked a lively debate (Knoff, 1983). It is clear that content analyses of drawings have rarely been shown to predict overt behavior, yet many users still try to make behavioral predictions (e.g., aggression, anxiety, history of sexual abuse) from drawing techniques. A quote from Cummings's (1986) review of projective drawing research seems to summarize a sensible way to view assessment with projective drawings and possibly a good way to view projective testing in general:

> "The greatest value associated with projective drawings does not lie in the graphic symbols represented on the paper. Rather, the value of the technique may be in the practitioner's opportunity to observe the examinee's behavior while drawing. Drawings provide a nonthreatening beginning point which should lead to an in-depth exploration of attitudes, feelings, and beliefs via the synthesis of direct interviews, third-party interviews, observations, and test data" (pp. 238–239).

Conclusions

In this chapter we have outlined some of the major issues in the debate of when and how to use projective testing in the clinical assessment of children and adolescents. As with most assessment techniques, the problem with projective testing lies not in the techniques themselves, but in the inappropriate purposes for which they are often employed. This issue is exacerbated in the use of projective techniques because of wide-spread disagreement over the basic nature of these techniques. There is considerable debate over which psychological processes they are designed to measure, and there is lack of agreement over what method of interpretation (e.g., clinical or psychometric) is most appropriate for a given technique. The most important goal of this chapter was to provide the reader with a clear discussion of these issues so that projectives can be used appropriately, with the assessor clearly recognizing the limitations of whichever interpretive approach is used.

We have also summarized some of the major methods of projective testing that are used with children. We have discussed inkblot techniques, story-telling techniques, sentence-completion techniques, and projective drawings. Space limitations prevent an exhaustive review of specific techniques and interpretive systems. However, we have attempted to provide selected examples of each type of projective method as a basis for developing greater expertise in the use and interpretation of these techniques through further didactic and clinical training.

Chapter Summary

1. Projective techniques have been the focus of much controversy. However, they remain the most frequently used method of psychological assessment.
2. Much of the debate over projective techniques stems from the confusion over what the projective techniques were designed to measure and how to best evaluate their usefulness.
   (a) The first area of confusion is whether projective techniques obtain samples of behavior or whether they assess unconscious personality dynamics.

(b) The second focus of debate is whether projectives are ways of obtaining highly individualized clinical impressions or whether they are psychometric tests that should be evaluated by traditional indexes of reliability and validity.

3. The Exner Comprehensive System provides a structured method for administering, scoring, and interpreting responses to Rorschach inkblots.
   (a) The inkblots are administered in two phases: a free association phase and an inquiry phase.
   (b) Detailed scoring of responses provides 90 possible scores to be used in interpretation.
   (c) Normative samples of children have documented several age trends in children's Rorschach responses.
   (d) Scores from the Exner system have proven to be reliable.
   (e) The validity of scores for children has not been well established, although it has been difficult to determine the most appropriate way of testing the validity of Rorschach scores.
4. Thematic story-telling techniques provide a child with a relatively ambiguous picture and require that the child "make up a story" about the picture.
5. Most interpretive systems of thematic tests use a two-part interpretation of a child's stories. The first step interprets the process of a child's stories (e.g., coherence of stories) and the second step interprets the content of the stories.
6. A popular thematic test for use with preadolescent children is the RATC.
   (a) The RATC contains pictures depicting common situations that children experience and provides a standard scoring system for children's responses.
   (b) The explicit scoring instructions allow for reliable scoring of children's responses.
   (c) The standardization sample on which norm-referenced scores are based is quite small and its representativeness is questionable.
   (d) Existing evidence for the validity of RATC scores is quite limited.
7. Sentence-completion techniques provide the child with a sentence stem and require the child to complete the sentence.
8. Most sentence-completion techniques do not have standardized scoring procedures for interpreting children's responses. It is left to clinical judgment how to interpret the content of the responses.
9. Drawing techniques, such as the Draw-a-Person Technique, the House-Tree-Person, and the Kinetic Family Drawings are popular for assessing children because drawing is a familiar and enjoyable exercise for children.
10. Despite their popularity, scores derived from children's drawings have not been highly associated with other indicators of a child's emotional, behavioral, or social functioning.