

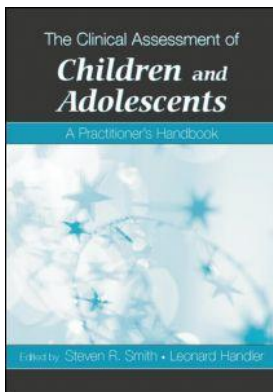
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Publisher: *Routledge*

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## **The Clinical Assessment of Children and Adolescents: A Practitioner's Handbook**

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### **Use of the Hand Test with Children and Adolescents**

Publication details

<https://www.routledgehandbooks.com/doi/10.4324/9781315827308.ch14>

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**Published online on: 11 Aug 2006**

**How to cite :-** A. Jill Clemence. 11 Aug 2006, *Use of the Hand Test with Children and Adolescents* from: *The Clinical Assessment of Children and Adolescents: A Practitioner's Handbook* Routledge  
Accessed on: 24 Mar 2023

<https://www.routledgehandbooks.com/doi/10.4324/9781315827308.ch14>

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## USE OF THE HAND TEST WITH CHILDREN AND ADOLESCENTS

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Practitioners are often in need of efficient and effective ways of assessing the needs of patients, especially when there are limitations on time, as is often the case. Less time-intensive methods of assessment are increasingly favored among clinicians because of the time demands of clinical practice (Piotrowski, 1999). Such techniques are especially useful in settings in which the time available to produce a report is short (such as medical settings or Employee Assistance Programs), or in settings in which comprehensive psychological testing is unnecessary or unavailable. Thus, brief instruments can greatly add to the clinician's tool chest. The Hand Test is one such instrument.

The Hand Test is a performance-based technique used to aid in the identification and classification of individuals with various emotional and behavioral disorders. The style in which the Hand Test is administered provides several advantages for assessing personality in children and adolescents. Because the test is flexible and less formal, it allows the examiner to establish an assessment atmosphere that is relaxed. This allows the examinee to be less self-conscious and eases tension (Morris, 1993). The informal nature of this test is especially beneficial for building rapport with younger examinees, who often view the procedure as a game (Wagner, 1986). Another advantage of using the Hand Test with children and adolescents lies in its simplicity. The instructions are easy to understand, and there is no need to be concerned about reading ability. Because the test can be administered in approximately 10 minutes, it does not push the limits of a child's attention span (Wagner, 1986). Furthermore, the ambiguous nature of the test makes it very difficult for the examinee to fabricate responses he or she believes will make them appear more or less mentally healthy than they are (Carson, 1990). These factors greatly enhance the clinician's ability to make the most accurate and immediate assessment possible. In general, the Hand Test is a projective technique that is especially well suited for use with children and adolescents.

The Hand Test is made up of nine cards with drawings of hands in various positions, with varying degrees of ambiguity. There is also a tenth card that is blank. The examinee is asked to "tell what it looks like the hands might be doing" on each of the first nine cards. On the

tenth card, the examinee is asked to “imagine a hand and tell what it might be doing.” Responses are recorded verbatim.

One characteristic that sets the Hand Test apart from other performance-based tests, such as the Rorschach, is its use of hands as stimuli. Hands are undeniably human and thus “pull” for our expectations and impressions of self and others as well as themes of efficacy and action possibilities. Hands are an important component of our relations with other people and with our environment. In interactions with others, we use our hands to relay friendship (high fives, waving), respect (handshakes), approval (thumbs up, pat on the back), anger (fist), and unspoken ideas (sign language). Likewise, hands are probably the most important tools we have for manipulating the immediate environment. We use them to grab, carry, push, pick up, repel, move, and place objects around us. Hands are often central instruments for attaining goals and fulfilling needs. How hands are perceived on the Hand Test reveals much about the examinee’s perceptions and action tendencies in the world. These characteristics make hands a very appropriate choice for use as a projective measure and add to the effectiveness and relevance of the Hand Test as an assessment tool.

In addition, the Hand Test task requires the child or adolescent to listen to and follow directions, to collaborate cooperatively with the examiner, to use abstraction, to be creative, to verbalize a response, and to stay on task. Of course, all of these abilities can be discerned by assessment instruments such as the WISC-IV (Wechsler, 2003) and the Rorschach, but if time is an issue, the Hand Test provides an excellent screening instrument for getting a snapshot of all of the above. This can be especially useful when school success or failure can influence a child’s reaction to measures like the WISC-IV that appear to the child as “academic-like” tests. Because the Hand Test does not appear similar to the achievement tests children and adolescents often encounter in school settings, it is somewhat less influenced by test anxiety, performance concerns, etc.

Because of its straightforward scoring system and brevity of administration, the Hand Test is considered a logical choice for use as a screening instrument, or as an addition to a standard battery (Goh & Fuller, 1983; Wagner, 1986; Wagner, 1999). Especially noteworthy here is the ability of the test to identify prototypical action tendencies or behaviors that are close to the surface. Moreover, repeated administrations can give the examiner an idea of patient progress and the presence of emerging experiences and needs during the therapy. Its brevity and simplicity make this especially easy to do, given that administration and scoring takes only 15 minutes on average. Furthermore, the use of this simple and straightforward stimulus produces a measure that is more grounded in form and is less complex than other instruments, such as the Rorschach and the CAT. Thus, if used together, these measures supply a gradation of stimulus complexity. For example, if one demonstrates problems with reality testing on the Hand Test, this should be a clear indication of problems in deciphering and management of even very basic perception tasks and most certainly denotes the need for further testing.

## **DESCRIPTION OF SCORING**

### **Quantitative Scoring**

The Hand Test is typically scored with the use of 15 quantitative variables. These are outlined by Wagner (1983) as follows:

Affection (AFF): Responses involving a warm, positive interchange or bestowal of pleasure (e.g., patting someone on the back).

**Dependence (DEP):** Responses expressing a need for help or aid from another (e.g., someone pleading for mercy).

**Communication (COM):** Responses involving a presentation or exchange of information; (e.g., a child saying how old he or she is).

**Exhibition (EXH):** Responses involving displaying oneself in order to obtain approval or to stress a special noteworthy characteristic of the hand (e.g., showing off muscles).

**Direction (DIR):** Responses involving dominating, directing, or influencing the activities of others (e.g., giving a command).

**Aggression (AGG):** Responses involving the giving of pain, hostility or aggression (e.g., slapping someone).

**Acquisition (ACQ):** Responses involving an attempt to acquire an as yet unobtained goal or object (e.g., reaching for something on a high shelf).

**Active (ACT):** Responses involving an action or attitude designed to constructively manipulate, attain, or alter an object or goal (e.g., carrying a suitcase).

**Passive (PAS):** Responses involving an attitude of rest and/or relaxation with a deliberate withdrawal of energy from the hand (e.g., hand folded in your lap).

**Tension (TEN):** Responses in which energy is being exerted, but little or nothing is being accomplished; accompanied by a feeling of tension, anxiety or malaise (e.g., hanging on to the edge of a cliff).

**Crippled (CRIP):** Responses involving a sick, crippled, sore, dead, disfigured, injured, or incapacitated hand (e.g., a hand that is bleeding).

**Fear (FEAR):** Responses involving the threat of pain, injury, incapacitation or death (e.g., raised up to ward off a blow).

**Description (DES):** Examinee does little more than acknowledge the presence of the hand (e.g., "just a hand").

**Bizarre (BIZ):** Responses based on hallucinatory content, delusional thinking, or peculiar, pathological thinking (e.g., a crocodile creeping along the wall).

**Failure (FAIL):** Scored when no scorable response is given to a particular card.

**FAIL** reflects the inability of the examinee to respond to the stimuli and may also indicate inappropriate behavioral tendencies manifested under conditions of lowered consciousness.

All of the 15 quantitative variables can be summarized into the following categories for scoring purposes:

**Interpersonal (INT):** Reflects interactions with others and is therefore made up of six quantitative responses, AFF, DEP, COM, EXH, DIR, and AGG.

**Environmental (ENV):** Represents an examinee's attitude toward the noninterpersonal world and is a combination of ACQ, ACT, and PAS responses.

**Maladjustive (MAL):** The combined total of TEN, CRIP, and FEAR responses; suggests difficulty in achieving successful interactions, either interpersonal or environmental.

**Withdrawal (WITH):** Made up of the total DES, BIZ, and FAIL responses; suggests an inability to establish meaningful and effective life roles.

**Pathology (PATH):** Estimates the total amount of psychopathology present as reflected in the individual's test protocol. The PATH score is calculated by adding the MAL

score to twice the WITH score or  $MAL + 2 (WITH)$ . For example, if an adolescent's Hand Test protocol contains two TEN responses and a BIZ, the subsequent PATH score will be 4 [(2 TEN) + 2 (1 BIZ)].

**Acting Out Ratio (AOR):** Reflects aggressive behavior tendencies and is determined by comparing the total number of positive interpersonal responses (AFF + COM + DEP) with the total number of negative interpersonal responses (DIR + AGG). An Acting Out Score can also be created by subtracting the sum of the positive responses from the total of negative responses, with positive scores indicating a tendency for overt, antisocial or aggressive behaviors, and negative scores indicating behavior tendencies that are more socially desirable. For example, if a child's Hand Test protocol contains two AFF, one COM, four AGG, and one DIR response, the subsequent AOS score will be +2 [(4 AGG + 1 DIR) - (2 AFF + 1 COM)].

**Average Initial Response Time (AIRT):** The average time required for the examinee to provide a scorable response to the test stimuli across the ten cards.

### Qualitative Scoring

Wagner (1983) also lists 17 qualitative scoring categories that may be useful to the practitioner when interpreting a Hand Test protocol. These scores serve as a supplementary tool for aiding in the interpretation of the findings but are not necessarily considered a part of the formal scoring system. Wagner (1983) notes that there is little research to support their use at this time. However, he does provide normative data on the qualitative scores and comments on their usefulness in enhancing the meaning of the quantitative scores when used in conjunction.

The qualitative scores are as follows:

**Ambivalent (AMB):** Responses expressing some hesitation or uncertainty about the action described in the response

**Automatic Phrase (AUT):** Responses involving stereotypic language of the examinee

**Cylindrical (CYL):** Responses in which the hand is manipulating a cylindrical object that is large enough to fill the space between the palm and fingers

**Denial (DEN):** Responses in which the percept is described and then denied

**Emotion (EMO):** Responses charged with emotion

**Gross (GRO):** Responses involving action that is primitive, uncontrolled, or unsocialized

**Hiding (HID):** Responses in which the hand is hiding something

**Immature (IM):** Responses in which the hand is involved with children or animals

**Impotent (IMP):** Responses in which the examinee expresses an inability to respond to the card

**Inanimate (INA):** Responses in which the hand is attributed to an inanimate object such as a statue or a painting

**Movement (MOV):** Responses involving random, purposeless activity

**Oral (ORA):** Responses involving food, liquid, or drugs

**Perplexity (PER):** Responses reflecting the examinee's difficulty responding and sense of puzzlement

**Sensual (SEN):** Responses involving tactual, sensual experiences

Sexual (SEX): Responses involving sexual activity

Original (O): Responses that are highly unique

Repetition (RPT): Perseverative responses

## RESEARCH FINDINGS

Clearly one of the most impressive aspects of the Hand Test is its ability to predict overt behavior. It is this attribute that continues to draw researchers and clinicians to examine its use in a variety of settings. For example, the Hand Test has proved useful in the assessment of behavioral tendencies of children, adolescents (e.g., Clemence, Hilsenroth, Sivec, Rasch, & Waehler, 1998; Sivec & Hilsenroth, 1994; Wagner, Rasch, & Marsico, 1991; Hoover, 1977; Bricklin, Piotrowski, & Wagner, 1962), and adults (see Wagner, 1983, for a review). Other studies have found the Hand Test useful in differentiating behaviorally handicapped and emotionally disturbed children and adolescents from control groups (e.g., Hilsenroth & Sivec, 1990; Smith, Blais, Vangala, & Masek, 2005; Waehler, Rasch, Sivec, & Hilsenroth, 1992; Wagner, Rasch, & Marsico, 1990). In addition, the Hand Test has been found to distinguish between children and adolescents described as aggressive and those described as nonaggressive (Campos, 1968; Clemence, Hilsenroth, Sivec, & Rasch, 1999; Oswald & Loftus, 1967; Selg, 1965; Wagner & Hawkins, 1964). Furthermore, the Hand Test has shown strong inter-rater reliability among studies with children and adolescents, with scores ranging from 82% (Smith et al., 2005) to 91% (Hilsenroth & Sivec, 1990) across the 15 quantitative variables. Such research has certainly qualified the Hand Test as a valid measure of overt behavioral tendencies and has established this test as an effective instrument for clinical use. Additional reliability data are included in the *Hand Test Manual* (Wagner, 1983) and the *Hand Test Manual Supplement* for children and adolescents (Wagner, Rasch, & Marsico, 1991). The most notable findings regarding this instrument are elaborated in the following sections.

### Indicators of Social and Emotional Maladjustment

Past research has found the Hand Test Pathology summary score (PATH) to be a powerful measure of the level of psychopathology present, with higher scores indicating greater pathology, and has been shown to be especially useful in the discrimination of groups demonstrating various levels of social and emotional adjustment. Hilsenroth and Sivec (1990) identified the PATH, AGG, and PAS variables to be useful in the differentiation of socially and emotionally disturbed children from nonclinical children, with the disturbed group scoring higher on each of these variables. These findings were further supported by research reported by Waehler and colleagues (1992), which demonstrates the ability of the PATH and AGG scores to measure the severity of psychological disturbance in children with severe behavior disorders. Clemence et al. (1998) likewise found PATH to be an important screening variable across adolescent patient groups (inpatient, outpatient, and nonpatient). Their findings support the use of a PATH score greater than 3 as indicating at least mild emotional disturbance. In a review of the Hand Test literature concerning children and adolescents, Sivec and Hilsenroth (1994) identified PATH as one of the most robust indicators of problems among adolescents. Likewise, research concerning the prediction of future criminal behavior based on Hand Test scores of adolescents found the PATH score to be significant for both male and female groups (Lie & Wagner, 1996; Lie, 1994). Most recently, Smith et al. (2005)

found the PATH, AGG, and WITH scores to differentiate psychiatric outpatients and medically ill pediatric inpatients, with psychiatric patients scoring significantly higher on each of these variables (Cohen's  $d = .80, .90, \text{ and } .74$ , respectively).

### **Prediction of Acting Out Behavior**

Previous research points to another important indicator of disturbance in adolescents—the Acting Out Score (AOS). Because the Hand Test was designed to assess overt behavioral tendencies, it has been very effective in differentiating adolescents who demonstrate various levels of acting-out behavior (Bodden, 1984). For example, Campos (1968) found that AOS was capable of distinguishing between children described as aggressive and those described as nonaggressive. In addition, research by Oswald and Loftus (1967) showed that institutionalized adolescent males demonstrated higher AOS and AGG scores than the normal group, and Azcarate and Gutierrez (1969) found AOS scores of male adolescent delinquents to be related to the length of time spent in an isolation unit due to disrespectful and assaultive behavior. Hoover (1977) examined Hand Test scores of schoolchildren rated by their teachers as exhibiting maladjustive behaviors and concluded that the Hand Test variables were able to accurately identify overt behavior.

In order to assess the diagnostic efficiency of the Hand Test, several studies have explored the ability of the AOS cutoff scores to discriminate various clinical groups. Using an AOS cutoff score of 0, Wagner and Hawkins (1964) correctly classified 78% of delinquents who were assaultive versus those who were nonassaultive. Clemence, Hilsenroth, Sivec, and Rasch (1999) also found that an AOS of 0 was able to differentiate a group of children identified as aggressive from a nonreferred control group with 66% accuracy, whereas Selg (1965) found an AOS score of 1 was able to classify aggressive children with 86% accuracy. Upon examination of more severely disturbed groups, higher AOS cutoff scores have been found to be useful. For example, an AOS of 2 was used to accurately classify inpatient adolescents versus outpatients and nonclinical participants with 63% accuracy (Clemence et al., 1998) and Wetsel, Shapiro, and Wagner (1967) utilized an AOS cutoff score of 1 to classify chronic offenders with 66% accuracy when the offenders were compared with a group of nonrecidivist delinquents.

Concerning the clinical utility of the AGG variable, Wetsel, Shapiro, and Wagner (1967) found that an AGG score of 2 correctly classified recidivist delinquents with 68% accuracy. Likewise, Clemence et al. (1999) found that an AGG score of 2 was able to differentiate a group of children identified as aggressive by their teachers from a nonreferred control group, with an overall correct classification rate of 69%.

The significant findings of these studies show that children and adolescents who exhibit more aggressive behavior are likely to produce higher AGG and AOS scores. Therefore, it makes sense to use these two variables in the identification of children and adolescents who are prone to act out aggressively. When the Hand Test is used clinically, however, cutoff scores such as these should only be used as very crude guidelines and never as rules. Keep in mind that even though the reported classification rates are high, when 68% of individuals were correctly classified, 32% (almost a third) of those in the sample were misclassified. Therefore, additional data should always be used when clinical decisions or treatment recommendations are being made.

Furthermore, because the Hand Test has been shown to most accurately identify characteristic behavior tendencies that are “close to the surface” (Wagner, 1986, p. 279), Hand Test indicators of acting-out behavior should be considered a reflection of *current* potential

for aggression and not for aggressive behavior occurring over longer time periods, such as six months or a year. According to Wagner's (1986) definition, the behavior assessed by the Hand Test is more temporally immediate. Therefore, a more accurate assessment will be made by application of interpretations to behavior that corresponds more closely in time to the administration of the Hand Test.

### Usefulness with Other Measures

It is important to remember that the Hand Test alone is not designed to produce a complete description of the child's personality (Wagner, 1986). This instrument is truly best used as one component of a multimethod assessment battery and can easily be incorporated as such (Sivec & Hilsenroth, 1994). Therefore, what does the Hand Test add when used with other instruments? An important but less prolific area of research regarding the Hand Test is that surrounding the incremental validity of the test. Most recently, Smith et al. (2005) found that the Hand Test added significantly to the ability of the Behavior Assessment System for the Children-Parent Report Form (BASC-PRF; Reynolds & Kamphaus, 1992) to differentiate medical inpatients and psychiatric outpatients, increasing the correct classification rate from 66.7% (using the BASC Behavioral Symptoms Index alone) to 77.1% when the AGG and PATH variables were added to the model. Furthermore, when the AGG and PATH variables were entered into a regression on their own, the correct classification of groups was 75%. In addition, the Hand Test showed significant differences when the self-report measures were unable to differentiate between groups, further demonstrating the usefulness of the Hand Test as an addition to a standard battery.

## CLINICAL APPLICATIONS

The characteristics just described make the Hand Test useful in a variety of settings. Indeed, the Hand Test has been used clinically with a variety of clients for a variety of purposes. For example, the Hand Test has been used as a workplace screening instrument with employees, as a method for assessing how elderly individuals are coping with age-related changes, as a tool for assessing personality characteristics of those diagnosed with mental retardation, as a screening instrument for brain impairment, as a measure for identifying sexually abused children, and as a diagnostic tool for schizophrenic outpatients, psychiatric inpatients, and individuals suspected of meeting criteria for Dissociative Identity Disorder (see Young & Wagner, 1999, for a discussion of each of these applications).

Most recently, I have found the Hand Test to be especially useful as part of a consultation and liaison service within a hospital setting. Often the clinician working in a medical setting will have only a few sessions, and at times only a single session, to make contact, assess, and make recommendations for a patient, depending on his or her length of admission and physical condition. Thus, a very brief performance-based instrument that is easy to administer and score is truly needed. Furthermore, brief measures are often sufficient as a screening tool for complementing interviews with the patient, family members, and medical staff and as a method for enhancing the clinician's judgment regarding treatment decisions. The Hand Test fills this need by allowing the clinician to make contact, build rapport, make an initial assessment, and begin to form general ideas about the needs of the patient very efficiently. Because the Hand Test taps into the *current* experience of the patient, not necessarily past or future functioning, it is very useful in this setting. Therefore, the clinician can assess how well



the patient appears to be dealing with and adapting to the *current* life stressor, which is the primary focus of the assessment. Thus, the Hand Test, especially when combined with the more typical self-report measures used in medical settings (e.g., pain measures, quality-of-life measures, and coping instruments), supplies the clinician with very useful data to help the treatment team and the patient better manage the demands of the illness and medical treatment.

## CASE EXAMPLE

### Stacy

Stacy is a 17-year-old single Caucasian female who has a 1-year-old child. She was diagnosed with a serious form of cancer two years before referral. The type of cancer she has is fibrous and grows slowly, encroaching upon various internal organs. This particular form of cancer typically leads to a slow choking of internal organs and often requires years of treatment and several surgeries. At the time of the consultation, Stacy had already had three surgeries to remove parts of the tumor that were threatening major organs. She requires the use of a cane because of the impact of the tumor on her spine, and she is fully aware that her condition is likely to slowly worsen for years. She was referred by the palliative team for a consultation because of symptoms of anxiety, depression, and medical treatment resistance. Several members of the medical staff had reported poor treatment compliance, an inconsistent show rate for outpatient appointments, and a high number of unusual pain complaints that some suspected had psychological rather than entirely physical causes. In addition, an earlier consultation had been attempted a few weeks before this referral, during one of Stacy's hospital admissions, but she adamantly refused to cooperate with the former consultant. He was attempting to teach her self-hypnosis for pain management, but Stacy later reported that she felt she had no need to learn such a technique. The consultant asked that someone else be assigned, because of his strong feelings of frustration with this patient.

Previous school testing indicated that Stacy had a reading disability and was generally functioning below her age level on all areas of cognitive functioning. Interview data with the patient and her mother revealed that Stacy was experiencing an increase in physical pain, concomitant with increases in stress at home, where she lived with her parents, her brother, and her two-year-old daughter. Her home life was described as chaotic because of the numerous stressors that came with her family's low SES (no reliable transportation, inadequate income, dangerous neighborhood, poor housing conditions, etc.). When asked about coping skills, Stacy reported that "hanging out" with her on-again/off-again boyfriend and playing with her daughter seemed to help her deal with her stress.

Upon interview, Stacy presented as disheveled and demonstrated poor hygiene. She was at times friendly in the interview, but also somewhat mischievous, seeming to take pleasure in challenging me. She was generally cooperative, though, and described herself as "tough," saying she could "hold her own against anyone in her neighborhood." Her Hand Test responses are included in the Appendix.

Although this Hand Test is not terribly striking at first glance, it actually reveals a great deal of information about Stacy's functioning. She begins the task with an affiliative COM response, suggesting that she has the capacity to relate in a positive and friendly manner. This response, however, is followed immediately by a socially negative AGG response. Thus, Stacy approaches the task with responses that alternate dramatically in affect tone, which can indicate an individual's tendency toward the use of splitting as a defense (Hilsenroth &

Fowler, 1999). Taking into account observational data regarding Stacy's behavior, it appears that she approached the assessment as she approaches most interpersonal situations, with clear evidence of splitting. For example, team meetings on the palliative unit were characterized by a distinct divide in feelings toward Stacy. Treaters either felt fond of her or they felt completely frustrated by her. Also important to note here is that although she refused to cooperate with the first consultant assigned to her, Stacy responded to my direction by giving a second response to Card I when prompted, suggesting that she is able and willing to cooperate with others from time to time.

Stacy also gave three EXH responses, which is well above the mean for her age [.77 (median = .00)], and which make up 25% of her total responses. Thus, this patient may regularly seek out some form of approval and validation from those around her. Part of her initial focus in interpersonal relationships may also be her need to feel that others find her to be special. This may account for the rejection of her first consultant, who approached her initially with a plan to teach her self-hypnosis for managing her pain. His emphasis on the technique, rather than on the patient, may have left her feeling that she was not special to this treater. Upon transfer, aided by abundant information concerning the problems of the previous consultation, I chose a different approach, which was to take a clear interest in learning about the patient's unique experience and to validate her concerns. This approach proved to make a dramatic difference in Stacy's attitude toward the consultation. She quickly warmed up to me and was immediately compliant with the assessment. Thus, the high production of EXH responses on the Hand Test helps to explain why she responded better to an approach that involved empathic mirroring than she did to a more technical approach that failed to provide her with a sense of specialness. Indeed, some of her acting-out behavior and excessive pain complaints may be linked to attempts to receive special attention from staff. Therefore, this information was included in recommendations for further treatment, which specifically noted that future interactions should begin with an empathic approach involving a sufficient amount of mirroring. It was expected that this approach would provide a foundation from which improved coping skills could be taught, while still allowing Stacy to feel special.

Later, Stacy gave a CRIP response, followed immediately by an AGG response. In addition, a second CRIP on Card IX was immediately followed by an EXH response that had an aggressive tone ("throwing a gang sign"). This suggests that when feelings of inadequacy or damage arise, Stacy quickly moves toward aggression as a defense against these feelings. In fact, her second AGG response had an exhibitiv air to it as well (i.e., "shaking the fist" as opposed to actually hitting with the fist). It is as if the hand is waving its aggression in front of others to send a statement, not necessarily to impart injury to someone else, but to show that a person is powerful and strong. Thus, Stacy may rely on a show of aggression (AGG = 2, AOS = 1) in an attempt to signal to others a façade of strength and power in the face of her sense of inadequacy or weakness.

This interpretation is further supported by interview information collected during the assessment. When I asked how she felt about carrying a cane when others her age typically do not, Stacy responded, "It makes a great weapon." She went on to say that nobody "messes" with her because she can even beat up her older brother *and* his friends. Thus, she is clearly saying that when she is perceived as (or perceives herself to be) weak or inferior, she quickly moves to a position of aggressor. This defensive approach is clearly supported by the Hand Test results. Furthermore, Card X (the blank card) is said to reflect how an individual performs when left to rely on his or her own internal resources. Here we see that Stacy may fall back on her use of aggression to seek approval from those around her. This is not surprising, given the tough, inner-city environment in which she lives.

It is important to note that research on the CRIP response with physically ill individuals indicates that CRIP does not necessarily reflect the simple presence of illness or deformity (Smith et al., 2005), but may be more likely to be related to an internalized sense of damage or inferiority (Lenihan & Kirk, 1990; Hilsenroth & Fowler, 1999; Wagner & Young, 1999). Therefore, you might not necessarily see a CRIP response with someone who is ill or injured unless that individual has come to view him- or herself as inadequate or injured in a more personal or psychological way. More research is certainly needed to better understand this variable, but as this case example demonstrates, much can be gleaned from this response when it is taken in context with other available information.

Stacy's low AIRT score (2.9 seconds) denotes a tendency toward impulsivity. Although she is within the range of the normative sample for her age group (2–18 seconds; Wagner, Rasch, & Marsico, 1991), she is on the low end (mean = 6.76; median = 6.30). This impulsivity seems to be sustained throughout the task, demonstrated by a High Minus Low score ( $H - L$ , calculated by subtracting the shortest response time from the longest response time across cards) of only four seconds. This also indicates no evidence of card shock and represents a consistent impulsive response style.

By analyzing the card sequence, one can see that Stacy does not produce an environmental response until Card VIII. Thus, she seems to approach the task predominantly with a focus on interpersonal themes and only refers to environmental attitudes later in the test. When she does refer to environmental manipulation, it is in the form of ACQ responses, as opposed to ACT or PAS responses. Thus, she may need to organize herself around relationships before getting to the point where she can begin to consider dealing with environmental demands. Even then she may feel very unsure of her ability to do so, perhaps feeling conflicted about her ability to achieve her goals (ACQ coupled with Ambivalence [AMB]), as opposed to responding with the certainty that her actions will be carried out successfully. Her lack of ACT responses also suggests that she may lack the sense of self-efficacy that goes along with successful manipulation of the environment. It may also be that because of her physical limitations, she has come to question her own constructive abilities and her effectiveness in reaching her goals. In terms of treatment, then, Stacy is likely to respond better if she is in psychotherapy with someone who she feels finds her special and can offer realistic encouragement as well as a stable base from which to plan future behaviors. She will likely need regular help making simple goals and planning clear, effective ways to accomplish them until she is better able to integrate these skills into her daily life.

The Hand Test data, along with interview data (with Stacy, her mother, and staff) and clinical observation, resulted in important treatment recommendations. Because there was no evidence of gross psychotic or organic problems beyond her learning disability, no further testing was recommended. Individual therapy was recommended, with an emphasis on building a strong therapeutic relationship via empathy, mirroring, and validation, from which to begin to form reachable goals for improving Stacy's coping skills, increasing her sense of self-efficacy, and reducing her impulsivity. Furthermore, information gleaned through assessment was useful in helping the staff better manage the patient's use of splitting within the team, which led to a reduction in the amount of chaos that existed around her treatment.

## CONCLUSION

Even though Stacy struggles academically and cognitively, performing well below her peers on all areas of academic functioning, she responded very well to the Hand Test, which pro-

vided a great deal of information about her personality and her behavior. As is typical of most children and adolescents when they complete the Hand Test, she did not seem at all threatened by the test, instead responding to it almost as a game, which is one of the clear strengths of this instrument in a clinical setting. Thus, the Hand Test is a valuable and effective clinical tool for use with this population.

## APPENDIX

### Stacy's Hand Test Responses and Scores

CARD	#	TIME	RESPONSE	SCORE
I.	1.	3"	"It's waving." (Q) "You know, saying 'Hi' to a friend." (E: Anything else?)	COM
	2.		"Oh, it could also be like about to slap someone in the face."	AGG
II.	3.	2"	"She's showing off her pretty nails."	EXH
III.	4.	1"	"It's pointing at something." (Q) "Look over there."	DIR
	5.		"Oh, and saying 'I'm number 1'."	EXH
IV.	6.	2"	"Patting someone on the head. Like my dad does to me."	AFF
V.	7.	4"	"This hand doesn't look like it's doing too good. Maybe it got slammed in a car door."	CRIP
	VI.	8.	2"	"This is definitely shaking a fist . . . like you're gonna punch somebody out."
VII.	9.	3"	"He's going to open the door, I guess."	ACQ (AMB)
VIII.	10.	2"	"They're getting ready to pick something up, something very small."	ACQ
IX.	11.	5"	"There's something wrong with that hand. It looks deformed. The thumb is way too big and swollen."	CRIP
X.	12.	5"	"It can be anything? Oh, throwing a gang sign." (D)	EXH

#### Hand Test Summary Scores for Stacy

INT = 8	R = 12	PATH = 2
ENV = 2	H - L = 4"	AOR = 2:3
MAL = 2	AIRT = 2.9"	AOS = 1
WITH = 0		

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