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Some Aspects of Affect Measurement on Rorschach's Test and the Multidimensional Personality Questionnaire

Greta L. Hunter
University of Tennessee - Knoxville

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I am submitting herewith a dissertation written by Greta L. Hunter entitled "Some Aspects of Affect Measurement on Rorschach's Test and the Multidimensional Personality Questionnaire." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Alvin G. Burstein, Major Professor

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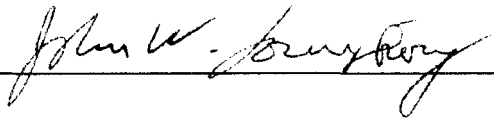
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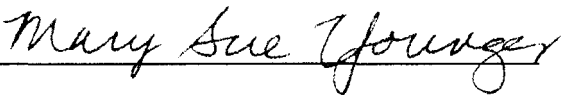
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Alvin G. Burstein, Major Professor


We have read this dissertation
and recommend its acceptance:


Sandra Touchman


John W. Brunsberg


Mary Sue Younger

Accepted for the Council:


Associate Vice Chancellor
and Dean of The Graduate School

SOME ASPECTS OF AFFECT MEASUREMENT ON RORSCHACH'S TEST
AND THE MULTIDIMENSIONAL PERSONALITY QUESTIONNAIRE

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Greta L. Hunter

August, 1994

ABSTRACT

The purpose of this study was to investigate some of the ways in which the relationship between two types of measures that assess positive and negative expectations about the world might be improved. The first measure, an index in the Burstein-Loucks comprehensive scoring system (1989) for Rorschach's test, was based on object relations theory. The second measure consisted of two higher-order factors of the Multidimensional Personality Questionnaire (Tellegen, 1982), an empirically-derived instrument. Revision of the Burstein-Loucks index did not further improve the magnitude of the relationship between the two measures, although it may have slightly changed the nature of that relationship. The significance of finding even a relatively small amount of shared variance between two such different types of instruments is discussed. The high levels of interrater reliability possible by using a clinical-intuitive approach to scoring data is also discussed.

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CHAPTER 1

INTRODUCTION

Object relations theory predicts that good care-taking early in life will result in positive expectations about the world. Object relations theories constitute a branch of psychoanalysis that, to greater and lesser degrees, differs from orthodox Freudian psychoanalytic theory. In Freudian instinct theory, the emphasis is on tracing the origins of all behavior back to the primary physiological drives. In object relations theories, the focus is on the inborn need to develop attachments to others, regardless of whether this need can be reduced to a physiological drive (Eagle, 1984). The exact nature of those attachments depends largely on the quality of the ongoing relationship between the caretaker(s) and the infant; these repeated interactions shape the infant's internal psychological world and, consequently, his or her expectations about the external world. As the infant grows into a child and then into an adult, his or her internal world will continually shape and influence experiences with the external world; those experiences will, in turn, reinforce or alter the internal world.

In orthodox psychoanalytic (Freudian instinct) theory, the emphasis in understanding behavior is placed in relation to physiological drives. According to this theory, attachments to others is a by-product of the process of gratifying our basic drives (e.g. hunger). If we were able to gratify all of our drives by ourselves, e.g. through wishful thinking, we would develop no interest in people or in relationships (Eagle, 1984). The expectations we develop about the world are, in large part, a

result of how well our oral needs were gratified in the first stage of life. Successful negotiation of the psychosexual stages depends both on constitutional factors and on the "optimal" amount of drive gratification--neither too little nor too much. In essence, then, while not discounting the influence of other factors, object relations theories emphasize the social context in the origin of our expectations, whereas instinct theory emphasizes the physiological aspects.

The belief that our general expectations are established early in life is not limited to the psychoanalytic schools of thought. While theories of such things as temperament and learned helplessness offer different viewpoints regarding the origins of these expectations, there does seem to be general agreement that they are trait-like and that they strongly influence various aspects of our lives.

If, indeed, our day-to-day expectations about the world constitute a personality trait, then they should show up both on projective tests like the Rorschach and on objective personality tests like the Multidimensional Personality Questionnaire (Tellegen, 1982). The MPQ, which makes no assumptions about underlying theory, attempts to assess the level of two broad-based dispositional factors called Positive Emotionality and Negative Emotionality (PEM and NEM). Much of current personality research points to five basic dimensions underlying personality (Goldberg, 1993); PEM and NEM correspond to two of these dimensions.

For Rorschach's test, there are scoring systems available that are based on object relations theory and that attempt to assess various dimensions of the object representational world. The theoretical grounding of these systems holds promise for

furthering the clinical validity of the Rorschach. For many years, research on Rorschach's test has been plagued by such things as poor methodology (e.g. selection of inappropriate validation criteria) and lack of an underlying theory. Thus, even when statistical significance and psychometric validity have been demonstrated, the implications for clinical significance and validity have been unclear (Blatt, 1975; Burstein & Loucks, 1989).

The Burstein-Loucks scoring system, which is based on drive theory and on object relations theory, attempts to assess the individual's expectations not only about relationships but also the more subtle expectations about the world in general. The affective tone of these expectations is assessed, respectively, via the indices of Explicit Motivational Valuation (EMV) and Implicit Motivational Valuation (MV). Each response is categorized as "explicit" or "implicit" and is rated for its affective tone (malevolent, neutral/ indeterminate or benevolent).

Schaid (1993) looked at the correlations between the affective tone of both explicit and implicit responses and levels of PEM and NEM on the MPQ. For the explicit responses, there were statistically significant correlations between benevolence and PEM and between malevolence and NEM. However, with the implicit responses, the results were somewhat different. Regarding implicit benevolence, although there was a statistically significant negative correlation with NEM and a statistically significant positive correlation with PEM, it was of a lower magnitude than was the case for explicit benevolence. Furthermore, there were no significant correlations with implicit malevolence. This suggests that, while the implicit, less conscious

expectations do seem to be mapping onto the dispositional factors of the MPQ, they are more difficult to assess, particularly the implicitly malevolent expectations. This may be due to lack of clarity in the instructions for scoring MV, the need for finer distinctions in the scale, and the need for scoring examples that are more representative of responses that subjects actually give on Rorschach's test.

The present study attempted to explore these alternative possibilities and, consequently, aimed at improving upon the correlations Schaid obtained between MV and the MPQ factors of PEM and NEM. Hypotheses in this study were that the less conscious expectations about the world, as measured by the affective tone of the implicit responses, would be significantly correlated with the general disposition factors on the MPQ and that those correlations would be higher than those found by Schaid.

In the next chapter is presented a more detailed discussion of the relevant literature, beginning with the representative theories of the origins of our expectations about the world.

CHAPTER 2

REVIEW OF THE LITERATURE

According to object relations theory, an individual's personality or character is built and organized around a "core" of early experiences with the primary caretaker(s). The caretaker and other "objects" in the infant's reality, the infant's role in various interactions, as well as that of the objects, and the accompanying affective tone, all become symbolically represented in the infant's internal world. This representational world defines and shapes interactions with the external world. Those experiences, in turn, reinforce or alter the representational world. And it is not just our expectations about interpersonal relationships that are set in motion by our early experiences; the representational world "generalizes and provides the structures for understanding inanimate dimensions of reality" (Blatt & Lerner, 1983, p. 195; Blatt, 1991).

Freudian instinct theory takes a somewhat different view. In essence, healthy development depends on the successful management of one's physiological drives, with neither too little nor too much gratification at each of the psychosexual stages. Freud believed that there existed an "inherited biological susceptibility to being fixated in a particular developmental phase", although it was never clear just how much importance he assigned to constitutional factors (Fisher & Greenberg, 1985, p. 84). Whatever the relative contribution of biology versus experience, one's personality is formed in the negotiation of these developmental stages. Our attitudes

about the world in general and what we can expect in our interactions with it are determined largely by how well our oral needs were met in the first stage of life. Overindulgence of these needs can lead to passivity and an unrealistic expectation that someone will always be there to take care of the individual's needs. Conversely, if one's oral needs were not adequately met, the individual will likely develop a pessimistic attitude regarding the relative balance of frustrations and rewards in life.

The belief that our expectations about the world are established early is also found in schools of thought outside of the psychoanalytic ones. Researchers in temperament, for example, believe that certain aspects of our personality, including our general mood, have a substantial genetic component (Bornstein & Lamb, 1984). Liebert and Wicks-Nelson (1981) refer to the landmark study by Thomas, Chess, and Birch, in which the development of 141 children was followed from birth to age ten or eleven. The findings revealed that a basic temperament was discernible in the first few weeks of life and that it persisted over time. All schemes of temperament include the variable "negative emotionality", which is the tendency to show various forms of negative affect, such as generalized distress, fear, and anger (Bates, 1990). A "positive emotionality" variable, which refers to a general tendency to express enjoyment, is sometimes included, as well. A child with a "difficult" temperament may elicit interchanges with the world that, unfortunately, only reinforce his or her distress and reduce the likelihood of more positive interactions; in this way, experience may build upon a genetic tendency.

Aside from considerations of genetic predisposition, the gratification of oral needs, and earliest interactions with caretakers, the way we explain things to ourselves is important, especially when our efforts don't seem to be making a difference. If we tell ourselves that things aren't going well because of some sort of personal inadequacy (rather than because of an impossible situation or task) and, further, if we believe that, no matter what we do, the outcome will continue to be negative, then we are very likely to become depressed (Abramson, Seligman, & Teasdale, 1985). Depression may, in turn, enhance future perception of "noncontingency", which then reinforces negative beliefs and expectations. It seems that the crucial part in the establishment and maintenance of this vicious cycle is the **expectation**; objective noncontingency is not sufficient.

Whatever the exact origins of our expectations about the world, they seem to be established early in life and to have a self-perpetuating quality. Since "most personality traits are commonly believed to have multiple genetic and environmental antecedents" (Tellegen, 1988, p. 636), it is unlikely that the question of exact origin will ever be answered. Fortunately, that does not preclude a belief that traits are real and that they make an important difference in life (Tellegen and Waller, in press).

This brings us to the subject of how this trait of "expectations about the world" ties into the current state of personality research. Based on an extensive review of the relevant research, Tellegen (1982) identified 11 basic personality traits and, from there, began a long process of atheoretically constructing the Multidimensional Personality Questionnaire (MPQ). Repeated factor analyses of the

MPQ's 11 basic trait scales yielded three higher-order factors, which Tellegen labelled Positive Emotionality (PEM), Negative Emotionality (NEM), and Constraint (CON). PEM and NEM, which are orthogonal to each other, are considered to be broad dimensions of disposition. Constraint (CON) seems to reflect variations in overall pleasure-pain regulatory style (more cautious versus more impulsive). According to Tellegen (1982), these higher-order factors of the MPQ have acceptable internal consistencies and retest reliabilities and are meaningfully related to other test and nontest variables, e.g. other personality inventories and clinical ratings of anxiety and depression.

A very recent development, occurring after the data for the present study were gathered, is to bifurcate PEM; the resulting components, "agentic" and "communal", share loadings on the lower-order factors of Well-Being and Social Potency. They differ from one another in that the agentic component has an almost exclusive loading on the Achievement factor, whereas the communal component has an almost exclusive loading on Social Closeness. In descriptive terms, the agentic factor seems to involve feelings of being socially effective, whereas the communal factor seems to involve feelings of being interpersonally connected.

Although their names might suggest that they are opposite poles on a continuum, PEM and NEM are independent of one another (Watson, Clark, & Carey, 1988). PEM and NEM "can each be thought of as an emotional/ cognitive/behavioral synergistic system"; the emotional component seems to play a crucial role in the maintenance and self-perpetuation of the system (Tellegen & Waller, in press, p. 38).

PEM reflects a generalized sense of well-being, competence, and pleasurable engagement with the world; NEM reflects a "predisposition to experience negative emotions that has further influences on cognition, self-concept, and world view" (Watson, et al., 1988, p. 347). In short, PEM and NEM are thought to measure an individual's relative level of engagement with the world and the affective tone of that engagement.

Although Tellegen believes there to be just three major dimensions underlying personality (or four, if PEM is bifurcated), many argue that there are five (Goldberg, 1993). The so-called "Big Five" are typically numbered and labelled as follows: Factor 1: Surgency or Extraversion; Factor 2: Agreeableness; Factor 3: Conscientiousness; Factor 4: Emotional Stability (vs. Neuroticism); and Factor 5: Culture, Intellect, or Openness to Experience. PEM corresponds roughly to Factor 1 (Tellegen, 1988), and NEM corresponds to Factor 4 (Watson & Clark, 1984). So, regardless of one's theoretical orientation regarding the exact origins of our expectations about the world, they do seem recognizable as traits.

The belief that a certain personality characteristic is trait-like does not preclude a concurrent acknowledgement of the influence of moods and situations. Some theorists posit a trait of "traitedness", which is a measure of consistency in the expression of attitudes and behaviors (Baumeister & Tice, 1988; Tellegen, 1988). Someone who is highly traited for a certain personality trait will show more consistency over time and will be less susceptible to situational influences than someone who is less traited for that same personality trait. For example, in the case

of Positive Emotionality, research shows that "significant state fluctuations occur and that persons differ substantially in the extent of their fluctuations" (Tellegen, 1988, p. 639). It's important to point out here that being low on traitedness for a given trait is not the same as not possessing the actual trait. Being low on traitedness regarding one's expectations about the world means that there is more fluctuation than is the case for someone who is higher in traitedness; it does not mean an absence of, in this case, expectations about the world.

If traits that relate to our expectations about the world show up on objective personality inventories like the MPQ, they should also show up on projective tests like Rorschach's. According to object relations theory, assessing the dimensions of the object representational world will reveal an individual's expectations about interpersonal relationships and about the world in general. Rorschach's test is an ideal arena for making such assessments. The basic and paradoxical task of the test is to "recognize" or make sense out of the novel and ambiguous (Burstein & Loucks, 1989). The world that the individual recreates in the ink blot milieu tells us a great deal about his or her internal world (Mayman, 1967). In short, it can give us "insight into the interplay of perception, apperception, cognition, projection, and motivation" (Lipgar, 1992, p. 224).

Most of the scoring systems available focus on one or another aspect of the object representational world. Before discussing the scoring system that is the basis for this study, let me highlight the contributions of the other major scoring systems in this area.

Mayman (1967) devised a scale for assessing object representation in dreams, which he later also applied to early memories and to Rorschach responses. He found that "level of object representation" was a salient and consistent dimension that showed up in each of these realms. His scoring system is content oriented and places particular emphasis on the affective tone of responses containing human content.

Blatt's system, also, considers the content of human responses and categorizes them as malevolent or benevolent; the main focus, however, is on the structure of the human responses (Blatt, Brenneis, Schimek, & Glick, 1976; Blatt & Lerner, 1983; Blatt, Tuber, & Auerbach, 1990). His system is based on the developmental premises that, with increasing age, normal development entails increased differentiation of others, greater articulation of attributes, and interactions that are increasingly motivated, purposive, and benevolent. In a longitudinal study that lasted for more than 20 years, Blatt found just that. Compared to the group of normals, the Rorschach responses of the patient group were characterized by human figures that, among other things, were engaged in malevolent activity significantly more often.

The best approach seems to be one that assesses both structure and content, without neglecting either. Stricker and Healey (1990) state that "content approaches are more descriptive, whereas structural data contribute to the understanding of level of pathology. Both appear necessary to obtain a full picture of an individual's object relations" (p. 227). Both appear necessary also when trying to make certain differential diagnoses, e.g. between depressed and nondepressed borderline disorders

or between borderline and psychotic personality organization (Stuart, Westen, Lohr, Benjamin, Becker, Vorus, and Silk, 1990).

In addition to examining responses containing human content, some theorists and researchers feel it is important to also consider responses containing other sorts of content, i.e. non-human responses. Lerner (1991), for example, believes that the experiential themes found in non-human content lend convergent validity to the more conscious object relational themes found in human responses. Although their content analysis is not specifically tied to object relations theory, Phillips and Smith (1953) posited that the affective tone of Rorschach responses about the environment, e.g. desert, thunderclouds, has a direct relation to the feelings and attitudes of the subject.

Urist (1977) takes things a step further. His Mutuality of Autonomy (MOA) scale assesses the relationships between both animate and inanimate figures on the Rorschach, based on the belief that any percept about an interaction will reveal something about that individual's potential for interpersonal relationships. In research using Urist's MOA scale, Blatt, et al. (1990) found results that complemented those of the longitudinal study using Blatt's scale. Just as more malevolent human interactions as measured on Blatt's scale were associated with increased pathology, so were malevolent interactions (animate or inanimate) as measured on Urist's scale associated with increased thought disorder.

Having reviewed the major systems available for assessing various aspects of the object relational world, I turn now to the Burstein-Loucks scoring system (1989), which provides the basis for the present study. This scoring system is based on

which provides the basis for the present study. This scoring system is based on psychoanalytic theories of both drive and object relations. The object relations indices assess the structure and content of both human and non-human responses, both interactive and static. Out of these measures, a rich and detailed picture of the individual's object representational world emerges.

Two of these indices assess the affective tone of the individual's expectations. Explicit Motivational Valuation (EMV) captures the feeling tone that accompanies the more conscious expectations about interpersonal relationships. Implicit Motivational Valuation (MV) assesses the affective tone of the more subtle expectations about the world in general. Each response is categorized as "explicit" or "implicit" and is then rated for its affective tone (malevolent, benevolent, or neutral/ indeterminate).

Schaid (1993) looked at the correlations between the malevolence and benevolence of both explicit and implicit responses and the dispositional factors of PEM and NEM on the MPQ. For the explicit responses, she found a positive correlation between benevolence and PEM (.27, $p = .003$) and between malevolence and NEM (.2475, $p = .007$). Her findings regarding implicit responses were more puzzling. As would be expected, implicit benevolence was negatively correlated with NEM (-.2003, $p = .023$), and positively correlated with PEM (.1709, $p = .045$); this latter correlation, while still statistically significant, was not of quite the same magnitude as that found with explicit benevolence (.27). Furthermore, there were no significant correlations between implicit malevolence and either PEM or NEM. These results suggest that, while the implicit expectations do seem to be mapping onto

the dispositional factors of PEM and NEM, they are more difficult to assess, particularly the implicit malevolent expectations. There may be several factors that would account for this.

First, the scoring instructions are unclear regarding whether responses should be scored from a phenomenological standpoint, i.e. the subject's, or from a clinical, interpretive standpoint. Whatever the approach, it must be consistent. Based on Mayman's findings (1974) about the viability of using "the trained intuition of clinical judges" (p. 456), it was felt that adopting this as convention may help improve the reliability of the MV index.

A second possible reason for Schaid's findings has to do with the representativeness of the examples available for scoring MV. The examples provided in the manual for the Burstein-Loucks system are based on a survey in which 200 college students were asked to indicate their like or dislike for 200 items representing various content categories (Burstein & Loucks, 1989). However, the motivational sets of these students were different from those of individuals who are taking Rorschach's test for clinical or research purposes. Furthermore, the items chosen for the content categories were not generated from Rorschach protocols (written records) and so cannot be assumed to be representative. Thus, the usefulness of these ratings to guide in scoring is questionable.

And third, given the nature of what MV is trying to assess--namely, the more subtle expectations about the world--it may be that a three-point scale limits our ability to make some of the finer distinctions. Thus, expanding the MV scale from

three points to five points, taking representative examples from past Rorschachs to use as guidance, and adopting the convention of using a clinical, interpretive approach all should help to increase the reliability and validity of this index.

The hypotheses of the present study were that making these changes would improve upon the correlations Schaid found between the affective tone of subtle expectations about the world (as measured on Rorschach's test) and the MPQ disposition factors that assess the typical level and nature of an individual's engagement with the world.

CHAPTER 3

METHOD

Subjects

The subjects used for this study consisted of 97 high achieving undergraduate students enrolled at the University of Tennessee in Knoxville. Each student was a member of a special academic program: Honors Physics, Honors Chemistry, or College Scholars. These programs offer alternative courses of study for undergraduate students who excel in the Arts and Sciences. Use of this population was justified for two reasons: 1) it was similar to that used by Tellegen (1982) in the development of the Multidimensional Personality Questionnaire, and 2) as a national resource, college students are, in and of themselves, worthy of study.

The data used in this project was based on subjects who were tested between the years 1984 and 1991, inclusive. All subjects were screened for a history of psychological symptoms. Students who endorsed any of the "Stop" items on the Cornell Index, or whose total score was greater than 12, were not included for this project.

According to Cohen's statistical power analyses (1992), an N of 97 should ensure adequate power for detecting an estimated medium effect size, i.e. impact of one variable upon the other, given a significance criterion of .05 and Spearman's rho as the statistical test.

Materials

1. Rorschach's test consists of ten cards, each printed with a picture of a non-representational inkblot. Five are achromatic, and five are both achromatic and chromatic. Subjects are asked to tell what they see in the inkblots and, after all ten cards have been presented, the examiner reviews each response with the subject and inquires about the justifications for each percept. This inquiry helps to reveal the cognitive, perceptual, and emotional processes at work. The written record of both the initial responses and the inquiry is referred to as the protocol. The resulting data can then be reduced and made more manageable via any number of scoring systems.

The Burstein-Loucks scoring system is based on psychoanalytic theories of both object relations and drive; it provides indices for processes of perception, cognition, motivation, and emotion. The individual's expectations about relationships and about the world in general are assessed via four indices called, collectively, Interpersonal Expectations. One index, Human Articulation, assesses aspects of human content in a response, e.g. physical attributes or social role. Motivational Articulation focuses on the human emotion or human movement in a response, and Explicit Motivational Valuation looks at the affective tone of interpersonal content. Implicit Motivational Valuation (MV), which is the focus of the present study, assesses the affective tone of the non-interpersonal environment.

In terms of the Interpersonal Expectations dimension, every response in a Rorschach protocol is categorized as explicit or implicit and is then rated for affective tone. Implicit Motivational Valuation (MV) is scored for human responses that

contain no emotion or movement, animal responses, and objects; this includes animals or objects in movement or interaction, provided that the movement or interaction is not characteristic of humans. The feeling tone accompanying these implicit responses is then categorized as benevolent, neutral or mixed, or malevolent [(B), (N), or (M)].

For the present study, three changes were made in the scoring for MV. First, the convention of using an interpretive, clinically-informed approach to each response was adopted. As mentioned previously, reliability for this index may have been compromised by the lack of a consistent approach. Scoring from a clinical standpoint and scoring from a phenomenological standpoint each have their advantages, but they are not used interchangeably.

The second change was the expansion of the scale from three points to five points. Given the nature of the subject matter, i.e. the less conscious expectations about encounters with the world in general, the three-point scale may not allow for some of the finer distinctions. It may be that movement in either direction from the neutral category represents increasing levels of engagement with the world, with one direction representing positive, pleasurable engagement, and the other direction representing negative, aversive engagement. It was felt that expanding to five points would improve the scale's sensitivity in assessing these dimensions without offering more category choices than is necessary and, thus, inadvertently decreasing reliability.

The third change, which was closely tied to the first two changes, was the generating of appropriate examples, to guide in scoring, for each of the five categories in the scale. Initially, reclassifying examples from the Burstein-Loucks

scoring manual gave a beginning guideline for the process of establishing baseline interrater reliability. Out of this process came additional examples, recategorization of previous ones, and a clearer formulation of the general guidelines for scoring. Thus, the scoring of the data in this study was based on a five-point scale, using a clinically-informed approach, with judgements guided by examples that were generated in the manner just described.

An overview of the scoring guidelines, along with a few examples, will be given here. The complete list of examples is given in Table 1.

In order to minimize the confusion between the ratings of this scale, which were done on a continuum, and the dichotomous categorizations of Schaid's study (i.e. responses were either malevolent or benevolent), variables related to this scale were referred to as IMV variables. With this scale, the affective tone of an implicit response is indicated by a number. A highly malevolent response would receive a "one", and a highly benevolent response would receive a "five"; a response that is neutral, mixed, or indeterminate would receive a "three". As stated earlier, the extremes may represent increasing levels of engagement with the world, either pleasurable or unpleasurable in nature.

General guidelines for what constitutes a "one" are: Themes of destruction, danger, abandonment, and desertion. The source of aggression typically resides within the percept itself, rather than coming from outside. For example, volcano, monster, or bat.

Responses that would receive a "two" are: Themes of strangeness, distortion, sadness, being obscured, and fantasies of implied aggression. Also, percepts that the subject describes as seeming "weird", "crazy", etc. would be scored a "two" or, depending on the context, possibly a "one". Aggression is usually perceived as coming from the outside. Examples are Halloween mask, suit of armor, and a wilted leaf.

A "three" is score for responses that are neutral, very mixed, or indeterminate, i.e. there may be no predominant affect. Alternatively, there may seem to be a lack of affective investment altogether. For example, marine life, a person, or a party mask.

Percepts which promote life or are aesthetically pleasing receive a score of "four" or, if highly benevolent, a "five". Examples of a "four" are: trees, the Eiffel Tower, and rabbit. Examples of a "five" are: flower, wishbone, and church.

For each Rorschach protocol, these numbers were tallied to give a total Implicit Motivational Valuation (IMV) score. The total number of responses in each protocol (R) was recorded, so that the effects of response productivity could be investigated. An average IMV score was also computed ($AVGIMV = \text{total IMV} / \text{number of IMV responses}$). A higher AVGIMV corresponded to relatively more benevolent responses; a lower AVGIMV corresponded to relatively more malevolent responses.

2. The Multidimensional Personality Questionnaire (MPQ) is a 300 item self-report measure, developed by Auke Tellegen (1982). The MPQ is not tied to any

Table 1

Guidelines and Scoring Examples

When trying to decide between a 1 and a 2, or between a 4 and a 5, ask "how obvious is the malevolence or benevolence?" Which score would best capture the essence of the response? For example: "a cave" may be associated with things that are dark and somewhat foreboding. However, it would seem to belong in a category separate from that which contains responses in which fantasies of death, destruction, or abandonment are more prominent, e.g., "vulture."

The "essence" of a response is going to be some mixture of the specific content, the actions or interactions in the response, and the feeling tone.

1. Themes of destruction, danger, abandonment, desertion. Source of aggression typically resides within the percept, itself, rather than coming from outside.		
anatomy (including ovaries, etc.) anything "coming at you" anything smashed or flattened anything w/a stinger bacteria bat bear blood bugs w/pinchers or claws	crab desert dinosaur dragon fire or "on fire" fox monster, Big Foot, giant mushroom cloud panther	spider stingray teeth, mandibles, jaws volcano vulture weapon wolf x-ray

Table 1 (cont.)

2. Themes of strangeness, distortion, sadness, being obscured, fantasies of implied aggression. Also, any mention of percepts being "weird," "crazy," etc.--depending on the context, they would be scored a 2 or, possibly, a 1. Aggression is perceived as coming from outside.		
alien, anything from outer space	eyes (w/paranoid quality)	lizard
animal skin	fetus	mask (e.g., Halloween)
ant	flames from rocketship	moth
antlered animal	fly	raw meat
beetles	frog	smoke, exhaust
bugs	gargoyle	snail
caterpillar	helmet	stain
cave	human w/o head	storm clouds
cloak	ice	suit of armor
drawing of anatomy	jack-o-lantern	wilted leaf

Table 1 (cont.)

3. Neutral, very mixed, or indeterminate--i.e., there may be no predominant affect. Alternatively, there may seem to be a lack of affective investment altogether.		
airplane amoeba "Bill the Cat" bird building cliff clouds coat of arms continent	coral reef emblem fish flag heart (unless anatomical context is explicit) ink island map marine life	monkey most mythical creatures mountains party mask pencil person sexual anatomy sports

4. Percepts which promote life or are aesthetically pleasing.		
baby bear baby elephant bodies of water, e.g., ocean, lake, pond (unless it is really an afterthought, as in "something" ... and its reflection in the water) building w/decorative columns cat	dog Eiffel Tower food (e.g., apples, fried eggs) forest leaf plants	rabbit sculpture sun totem pole trees

Table 1 (cont.)

5. Percepts which are explicitly and clearly life-promoting or gratifying.		
angel art babies (human or animal, e.g., puppy) butterfly castle church	clown desserts, candy fairy flower gold jewels	maple seed music or instrument temple toy waterfall, fountain wishbone
<div> <div>autumn leaves }</div> <div>coral reef }</div> <div>sunset }</div> <div>fireworks }</div> </div> <div>provided that the focus is on the <u>pretty colors</u> and <u>not</u> on the explosion of the fireworks, the dying of the leaves, etc.</div>		

particular personality theory but, rather, grew out of an empirical investigation of the most robust and salient dimensions that may underlie personality. The mutually interdependent processes of test construction and building construct validity entailed numerous rounds of item acceptance and rejection.

After several years of constructs and data shaping one another, eleven primary and three higher-order factors "emerged as well-defined dimensions" (Tellegen, 1982, p. 1). Table 2 gives content summaries for the eleven primary scales, which are labelled as follows: Wellbeing, Social Potency, Achievement, Social Closeness, Stress Reaction, Alienation, Aggression, Control (vs. Impulsiveness), Traditionalism and Absorption.

These primary dimensions yield the higher-order dimensions of Positive Emotionality (PEM), Negative Emotionality (NEM), and Constraint (CON). Table 3 lists the factors which emerged in the factor analyses of the MPQ scales. PEM is associated with the primary scales of Wellbeing, Social Potency, Achievement, and Social Closeness; it is secondarily associated with Absorption. NEM is primarily associated with Stress Reaction, Alienation, and Aggression; it, too, is secondarily associated with Absorption. CON is most strongly associated with Control, Harm Avoidance, and Traditionalism. Internal consistency measures have yielded alpha coefficients ranging from .76 to .89. One-month test- retest correlations ranged from .82 to .92. Overall, internal consistency and retest reliability for the MPQ are respectable (Tellegen & Waller, in press).

Table 2
Content Summaries of the 11 Primary MPQ Scales

Scale	Self-Descriptors of High Scorers	Self-Descriptors of Low Scorers
1. Well Being	Has a cheerful, happy disposition; feels good about self; sees a bright future ahead, is an optimist, lives an interesting, exciting life, enjoys the things he or she is doing.	Is not a naturally cheerful person, is seldom really happy; does not seem to experience a lot of excitement and fun in life.
2. Social Potency	Is forceful and decisive; persuasive and likes to influence others; enjoys or would enjoy leadership roles; enjoys being noticed, being the center of attention.	Prefers others to take charge and make decisions; does not like to persuade others; does not aspire to leadership; does not enjoy being the center of attention.
3. Achievement	Works hard, drives self; enjoys working hard; welcomes difficult and demanding tasks; persists where others give up; is ambitious, puts work and accomplishment before many other things; sets high standards, is a perfectionist.	Does not like to work harder than is strictly necessary; avoids very demanding projects; sees no point in persisting when success seems unlikely; is not terribly ambitious or a perfectionist.

Table 2 (cont.)

Scale	Self-Descriptors of High Scorers	Self-Descriptors of Low Scorers
4. Social Closeness	Is sociable, likes to be with people; takes pleasure in and values close interpersonal ties; is warm and affectionate; turns to others for comfort and help.	Likes to be alone; can do without close ties; is aloof and distant; prefers to work problems out on her (his) own.
5. Stress Reaction	Is tense and nervous; is sensitive, feels vulnerable; is prone to worry and feel anxious; is irritable and easily upset; has changing moods; can feel miserable without reason; is troubled by feelings of guilt and unworthiness.	Does not feel vulnerable; can put fears and worries out of her (his) mind; quickly gets over upsetting experiences; is not troubled by emotional turmoil or guilt feelings.
6. Alienation	Believes that others wish her (him) harm; is a victim of false and nasty rumors; has been betrayed and deceived; feels used by "friends"; feels pushed around; has had a lot of bad luck.	Does not see self as victim; does not feel taken advantage of; feels treated fairly.
7. Aggression	Is physically aggressive; enjoys upsetting and frightening others; enjoys scenes of violence (fights, violent movies); victimizes others for own advantage; will retaliate, is vindictive.	Is not violent; does not enjoy others' distress; does not like to witness physical aggression; will not take advantage of others; would rather turn the other cheek than seek revenge.

Table 2 (cont.)

Scale	Self-Descriptors of High Scorers	Self-Descriptors of Low Scorers
8. Control vs. Impulsivity	Is reflective; is cautious, careful, plodding; is rational, sensible, level-headed; likes to plan his (her) activities in detail.	Is impulsive and spontaneous; can be reckless and careless; makes no detailed plans, preferring to "play things by ear".
9. Harm Avoidance	Does not or would not enjoy: participating in dangerous adventures or activities (e.g., skydiving); being in some natural disaster (e.g., a forest fire); being caught in a sudden and dangerous emergency (e.g., a hold-up); deliberately risking serious bodily injury (e.g., riding a runaway horse). Instead, prefers safer activities and experiences, even if they are tedious or aggravating.	Does or would enjoy dangerous and exciting experiences and activities; prefers these over safer ones that are tedious or aggravating.
10. Traditionalism	Endorses high moral standards; endorses religious values and institutions; expresses positive regard for parents; endorses strict child-rearing practices; values conventional property and a good reputation; opposes rebelliousness and unrestricted freedom of expression; condemns selfish disregard of others.	Does not belabor the importance of high morals; considers traditional religion outdated; does not believe in punitive discipline; is not prudish or very concerned over what is "proper"; sees value in rebelliousness and free expression; does not reject selfishness.

Table 2 (cont.)

Scale	Self-Descriptors of High Scorers	Self-Descriptors of Low Scorers
11. Absorption	Is responsive to evocative sights and sounds (e.g., a sunset); is readily captured by entrancing stimuli (e.g., overpowering music); tends to think in images; has "crossmodal" experiences, including synesthesia (e.g., sounds evoke color experiences); is capable of vivid and compelling imaginings; can vividly re-experience the past; becomes deeply immersed in own thoughts and imaginings; experiences episodes of expanded (e.g., ESP-like) awareness; experiences states of altered awareness (e.g., of "stepping outside oneself").	Is not easily caught up in sensory and imaginative experiences; does not readily relinquish a realistic frame of reference.

Table 3
Higher-Order Factor Analysis of MPQ Scales

	Labeled Factors				
	PEM	NEM	CON	PEM-A	PEM-C
Wellbeing	60	-16	-07	48	38
Social Potency	50	03	-32	42	28
Achievement	34	-05	06	54	-06
Social Closeness	37	-16	04	03	49
Stress Reaction	-17	61	08	-08	-17
Alienation	-09	57	08	02	-14
Aggression	01	49	-26	03	-02
Control	-05	-29	42	08	-15
Harm Avoidance	-13	-04	47	-26	07
Traditionalism	02	08	44	01	02
Absorption	35	32	-16	43	06

Note: In three-factor solution: PEM = (general) Positive Emotionality; NEM = Negative Emotionality; CON = Constraint. In four-factor solution PEM divides into PEM-A = Agentic Positive Emotionality and PEM-C = Communal Positive Emotionality.

Loadings > | .30 | are shown in boldface. Decimal points are omitted.

As mentioned earlier, PEM and NEM do not represent opposite poles on a continuum but, rather, independent dimensions underlying personality. Thus, an individual's score on one dimension is not related to and does not predict his or her score on the other dimension. PEM and NEM are considered to be basic dimensions of emotional temperament. According to Tellegen (1982),

They seem to index the strength of the individual's disposition to experience, respectively, pleasure and pain, reward and punishment, self-enhancement and self-imperilment, and to behave and think in ways that are conducive to these experiences. The third large dimension, Constraint, may reflect variations in overall pleasure-pain regulatory style: self-restrictive and cautious among high Constraint persons, more self-indulgent and impulsive among lows. (p.3)

Constraint is not directly correlated with mood but, rather, seems to reflect an individual's tendency to respond in a generally cautious versus reckless manner (Tellegen & Waller, in press).

High PEM scores seem to reflect behavioral and temperamental characteristics conducive to joy, excitement, vigor, and positive engagement with the world. Low PEM scores are associated with joylessness, fatigue, and depressive disengagement from the world. High NEM score are associated with anxiety, anger, and other states of negative engagement with the world. Low NEM scores represent calmness, relaxation, and other states of pleasurable disengagement (Tellegen, 1982). In short, PEM and NEM are thought to measure an individual's relative engagement with the world and the nature or affective tone of that engagement.

3. The Cornell Index was used to screen for the presence of severe psychiatric conditions. The test was developed during World War II to quickly assess large groups for the presence of psychiatric and psychosomatic disorders. Testing of 1,000 subjects yielded a reliability coefficient of .95 (Weider, Wolf, Brodman, Mittlemann, & Wechsler, 1949). The Cornell Index is a self-report measure containing 101 true-false questions about the existence of psychological or psychophysiological problems. Three items on the test, thought to reflect the greatest psychological difficulties, we considered "Stop" items. Subjects who endorsed any of these three items, or who had a total score greater than 12, were excluded from the present study. The "Stop" items are as follows: 1) "Did you ever have a mental breakdown?" 2) "Were you ever a patient in a mental hospital?" 3) "Have you been arrested more than three times?"

Procedure

The ideas and the data for this study were products of the Burstein-Loucks Research Project, a multifaceted and longitudinal project that involves construct validation and the collection of normative data on specific populations. Normative data on the high-achieving subjects used for this study was gathered between the years 1984 and 1991. The procedure for the original selection of subjects was as follows.

Students in the Honors Physics, Honors Chemistry, and College Scholars programs were sent a letter asking if they would like to participate in a research study of high-achieving college students. The names of those who wanted to participate were then randomly assigned to research team members, who were responsible for

arranging, administering, and scoring the tests. Each team member is a clinical psychology graduate student at the University of Tennessee, Knoxville, and has been trained in psychological testing.

Testing was usually conducted over two sessions, lasting two to four hours each. In the first session, demographic data were obtained, and subjects completed several measures, including the Cornell Index and the MPQ. The order of these measures was counterbalanced, to minimize the effects of test order. In the second session, Rorschach's test was administered, and an audiotaped structured interview was conducted. Subjects were offered the opportunity for individual feedback at a future date.

For the present study, records were chosen from this existing pool of data. Subjects who had endorsed any of the "Stop" items on the Cornell Index, or who had a total score greater than 12, were eliminated. 74 subjects, representing 35% of the original pool of 212, were eliminated in this way. All other subjects from the data pool were included, with the exception of those that were used in the establishment of interrater reliability.

Half of the records used in the current study were rated by the author. The rest were rated by another advanced clinical psychology graduate student, who is well-trained in the Burstein-Loucks scoring system. Initial examples for each of the five categories in the expanded IMV scale, which served as a starting point for establishing interrater reliability, were derived from reclassifying examples given in the scoring manual for the Burstein-Loucks system. An interpretive, clinically-

informed approach was used, both in the selection of initial examples and in the ratings of the actual records used in the study. The affective tone of a response can be conveyed in many ways (specific content chosen, the language the subject uses, etc.); since all of the potential combinations of these elements cannot be written out, clinical judgement is the best tool for making a final decision about overall affective tone.

To establish interrater reliability, batches of five protocols each were randomly selected from the data pool; each batch consisted of approximately 80 implicit responses. These protocols were not used again in the study. After each batch of five protocols was completed, all scoring discrepancies were discussed and, out of this process, additional examples to guide future scoring emerged. Reliability was estimated by calculating correlations and percent agreement for each batch of five protocols. Percent agreement was calculated both for exact agreement (e.g. both raters scored a response a 4) and for differing by no more than one (e.g. one rater scored a 4, and the other rater scored a 3, a 4, or a 5). Baseline reliability ranged from 76% to 81% for "exact" agreement, from 97% to 98% for "within one" agreement, and from .82 to .93 for correlation. These figures are shown in Table 4. After completing four batches, each containing five protocols, the interrater reliability seemed high enough to proceed.

After scoring 50 protocols, a mid-way interrater reliability check was done, to ensure that reliability was still high. Each of the two raters scored the last protocol completed by the other. "Exact" agreement was 88% for both protocols, "within

one" agreement was 96% and 92%, and the correlations were .93 and .91. After the last two protocols for the entire study had been scored, interrater reliability was again checked, using the same method. "Exact" agreement was 79% and 76%, "within one" agreement was 100% for both protocols, and overall correlation was .95 and .94. Thus, both the mid-way check and the final check showed that interrater reliability remained high.

Distribution of scores was estimated by randomly selecting half of the protocols and counting the number of times each scoring category was used. Category 4 ("somewhat benevolent") was scored the least (9%), and Category 1 ("extremely malevolent") was scored the most (30%). While this is not a perfect distribution, it does suggest that all of the categories are being utilized and that, therefore, this group of subjects is reasonably representative of the larger population. Table 5 lists the frequencies.

All subjects, then, had a total IMV score, total number of responses in the protocol (R), total number of implicit responses (IMVR), an average IMV score (AVGIMV), and two scores from the MPQ: PEM and NEM.

Statistical Procedure

Since the data are not normally distributed, and the IMV scale measures at the ordinal level, Spearman's rank order correlation technique was chosen.

Table 4

Interrater Reliability

Batch #	Exact	Within One	Correlation
1	76%	97%	.82
2	69%	93%	.86
3	81%	99%	.95
4	81%	98%	.93
Mid-way:	88%	96%	.93
	88%	92%	.91
Final/end:	79%	100%	.95
	76%	100%	.94

Table 5

Distribution of Scores for Ten Protocols Used
in Establishing Interrater Reliability

Total N (number of responses)	Category 1	Category 2	Category 3	Category 4	Category 5
280	84 (30%)	64 (23%)	70 (25%)	25 (9%)	37 (13%)

Hypotheses of the Study

Hypothesis 1 Correlations between implicit benevolence/malevolence on Rorschach's test (IMV) and PEM on Tellegen's MPQ will be positive and higher than those found by Schaid.

Hypothesis 2 Correlations between implicit benevolence/malevolence on Rorschach's test (IMV) and NEM on Tellegen's MPQ will be negative and higher than those found by Schaid.

CHAPTER 4

RESULTS

The relationship between affective tone of general expectations about the world, as indexed by Rorschach's test, and disposition variables, as indexed by the MPQ, was tested by computing Spearman's rank order correlation. Table 6 shows the correlation matrix. Results of tests for significant differences between these correlations and the ones found by Schaid are presented in Table 7.

Regarding the first hypothesis, the correlations between the measurements of implicit benevolence/malevolence used in this study (Total IMV and Average IMV) and PEM were positive (.1725 and .1990) and statistically significant beyond the .05 level. However, they were not significantly different from Schaid's correlations between measurements of either implicit benevolence or malevolence and PEM. For (B) and R-corrected (B), z difference scores were .097 and .2, respectively; for (M) and R-corrected (M), z difference scores were 1.195 and 1.251, respectively.

The second hypothesis, regarding correlations with NEM, was not supported. The correlations between measures of implicit benevolence/malevolence and NEM were nonsignificant (with Total IMV = .0054; with AVGIMV = .0596).

Although not a formal hypothesis, it was noted that both measures of response productivity were significantly and negatively correlated with AVGIMV. Thus, it appears that, as the number of responses goes up, the affective tone of the record becomes, on the whole, more malevolent.

Table 6

Intercorrelations Among Rorschach and MPQ Variables

	PEM	NEM	Total IMV	R	IMVR	AVGIMV	Proportion of AVGIMV
PEM		.1091 (p = .144)	.1725 (p = .046)	.0074 (p = .472)	-.0306 (p = .383)	.1990 (p = .025)	.1562 (p = .063)
NEM			.0054 (p = .479)	-.0352 (p = .366)	-.0879 (p = .196)	.0596 (p = .281)	.0174 (p = .433)
Total IMV				.3165 (p = .001)	.2660 (p = .004)	.5923 (p = .000)	.6601 (p = .000)
R					.9457 (p = .000)	-.4779 (p = .000)	-.4114 (p = .000)
IMVR						-.5420 (p = .000)	-.3540 (p = .000)
AVGIMV							-.8936 (p = .000)
Proportion of AVGIMV							

IMVR = Number of implicit responses

AVGIMV = Total IMV/IMVR

Proportion of AVGIMV = Total IMV/R

Table 7
Tests of Differences Between Correlations*

Hunter Variables	Correlation	z	Schaid Variables	Correlation	z	z-difference
Total IMV w/PEM	.1725	.174	(B) w/PEM	.1591	.16	-.097
Total IMV w/PEM	.1725	.174	(M) w/PEM	.0012	.001	-1.195
AVGIMV w/PEM	.1990	.202	R-corrected (B) w/PEM	.1709	.173	-.2
AVGIMV w/PEM	.1990	.202	R-corrected (M) w/PEM	.0208	.021	-1.251
Total IMV w/NEM	.0054	.005	(B) w/NEM	-.2003	-.203	-1.437
Total IMV w/NEM	.0054	.005	(M) w/NEM	-.1297	-.13	-.933
AVGIMV w/NEM	.0596	.06	R-corrected (B) w/NEM	-.1509	-.152	-1.465
AVGIMV w/NEM	.0596	.06	R-corrected (M) w/NEM	-.0179	-.018	-.539

*As shown by the z-difference scores, none of the tests reached the .05 level of significance.

Neither PEM nor NEM were correlated with the measures of response productivity: number of total responses (R) and number of implicit responses (IMVR). Thus, one's general disposition, as measured on the MPQ, is not related to response productivity on Rorschach's test.

CHAPTER 5

DISCUSSION

The main goal of the present study was to determine whether to refine the measurement of implicit expectations about the world and to validate that measurement by assessing its relationship to an outside measure that is thought to assess the same (or a similar) construct. Although there was a positive correlation between implicit benevolence and PEM, and a negative correlation between implicit malevolence and PEM, these correlations were not significantly different from those obtained by Schaid. The percentage of variance accounted for by the highest correlation in this study (AVGIMV with PEM = .1990) is .0396. The percentage of variance accounted for by the highest correlation in Schaid's study (implicit benevolence with NEM = -.2003) was .0401. Thus, expanding the scale from three to five points does not seem to improve its correlation with the MPQ constructs of PEM and NEM.

In the revision of the IMV scale and the gathering of more representative scoring examples, it seemed that responses on either side of the neutral category might represent increasing levels of engagement with the world. In other words, more benevolent responses could represent the pleasurable engagement of high levels of PEM, and more malevolent responses could represent the unpleasurable engagement of high levels of NEM; neutral responses could represent relative disengagement (pleasurable or unpleasurable). The results, however, suggest that

while the 5-point IMV scale seems to be mapping onto the PEM dimension, it does not seem related to the NEM dimension.

Higher levels of benevolence, as measured in this study by higher scores on both Total IMV and AVGIMV, are associated with the higher levels of pleasurable engagement reflected in an elevated PEM score. Higher levels of malevolence, as measured by lower scores on both Total IMV and AVGIMV, seem to be associated with the unpleasurable **disengagement** of a low PEM score, rather than the unpleasurable engagement of a high NEM score. Thus, while more benevolent responses correspond with a higher PEM, more malevolent responses do not correspond with a higher NEM but, rather, with a lower PEM.

Although there were no statistically significant differences in the correlations between the two studies, Schaid did find some correlations with NEM where this study did not, and this study found some correlations with implicit malevolence where hers did not. A tentative hypothesis is that revising the IMV scale does not change the overall magnitude of the relationship with the MPQ but, rather, slightly changes the way in which the two measures are related.

Another hypothesis about the results both of the present study and of Schaid's study relates to affective tone being scored on a single continuum. Responses in Schaid's study were categorized dichotomously as either malevolent or benevolent, whereas the present study rated responses in a more graduated way. However, the scales in both studies were based on a continuum. Just as PEM and NEM are found to be independent, it may be that implicitly benevolent and malevolent aspects of

affect should, likewise, be considered independent and scored on separate dimensions. In both the present study and in Schaid's study, affective tone was scored on just one dimension; thus, a response that contained high levels of both benevolent and malevolent affect ("a wolf behind some flowers") would be scored a "three", because of its mixed nature. However, a response that is somewhat devoid of affect ("a map") might also receive a "three". Obviously, scores on a single continuum cannot capture the very different nature of these types of responses. Murray (dissertation in progress) is currently investigating the potential usefulness of using two dimensions.

The present study supports Schaid's findings that the Burstein-Loucks index for measuring affective tone of implicit expectations, based on object relations theory, shares some common ground with Tellegen's empirically derived constructs. Although none of the correlations from either study are large in an absolute sense, they are meaningful when one considers their true context. They suggest that, although approaches to the definition and assessment of personality characteristics can vary widely and seem quite different on the surface, they may be tapping into the same underlying construct.

PEM and NEM, particularly when used together, seem to be useful diagnostic indicators. NEM can be viewed as one's relative tendency to experience general psychological distress and is related to both anxiety and depression. An assessment of NEM alone, however, cannot reliably distinguish between these two types of disorders. Taking PEM into account can clarify the picture; the particular

combination of high NEM and low PEM is associated with depressive diagnoses (Watson, et al., 1988).

Similarly, assessing the theory-based constructs of the object representational world, also, aids in diagnosis. A detailed assessment of the inner world is particularly helpful in the case of patients with severe psychopathology, who "often present contradictory, confusing, and misleading clinical pictures" (Blatt & Lerner, 1983, p. 10). Assessing the implicit, less conscious expectations about the world may lend support to the more tangible expectations about interpersonal relationships and may provide a richer, more representative picture of the individual's inner world. The findings of both the present study and Schaid's study support the hypothesis that the index for assessing the affective tone of implicit expectations shares some common ground with the MPQ. Other possible revisions in this index, such as the separation of the single continuum into two dimensions, as Murray is investigating, may further increase its sensitivity and enhance its usefulness in both research and clinical settings.

One of the secondary findings of this study relates to how this assessment of the inner world is approached. The use of a clinical-intuitive approach to the scoring of the data, with the resulting high levels of interrater reliability, lends support to Mayman's (1974) assertion of its viability. The affective tone of a response can be conveyed in a variety of ways: the content chosen, the nature of actions or interactions in a response, the language the subject uses. Given the various possible combinations of these elements, an exhaustive list of examples would not be

pragmatic. Instead, once basic guidelines are established, a clinician's best tool for making a decision about overall affective tone may be his or her clinical judgement (Krohn & Mayman, 1974).

Finally, the issue of controlling for response productivity needs to be addressed. Since, in most systems for administering Rorschach's test, the subject is not limited in the number of responses he or she gives, making comparison between any two given protocols can be difficult; subjects who give more responses will receive more or higher scores on a number of indices. One way of facilitating comparison between individual records is to divide the total score for a particular index by the number of responses (R) in the entire record. Some current writers on the subject (Lipgar, 1992; Kinder, 1992) feel that too much information is lost in controlling for R and that, except for where necessary in certain types of research, it should be avoided.

In the present study, there were two types of productivity variables: number of responses in the protocol (R), and number of responses receiving an IMV score (IMVR). Examining the role of both variables proved to be useful. For example, one cannot tell whether a total IMV score of 50 is the product of 50 IMV scores of "1" or of 10 IMV scores of "5"; an average needs to be obtained. This average captures the overall affective tone of a given number of implicit responses. If, in addition, one is interested in the relative occurrence of this affective tone in the entire record, one can include R in the calculations. Thus, accounting for response productivity can be useful in interpreting other variables on Rorschach's test.

It's also useful to look at response productivity variables in and of themselves. For example, the response productivity indices were highly correlated with one another, and both indices were negatively correlated with average IMV score (AVGIMV); in other words, the subject who gives a lot of responses is very likely to also give a lot of implicit responses but, as these numbers go up, the affective tone of the record as a whole will tend to become more malevolent.

One possible explanation for this relates to the effectiveness of psychological defenses. Since subjects with severe psychopathology were eliminated from this study, those who were included can be assumed to be relatively healthy and, judging by their membership in the Honors and Scholars programs, fairly successful. Psychological health is not, from a psychoanalytic point of view, the absence of conflict, but success at managing unavoidable conflict. Thus, it is not an absence of psychological conflict that enables these students to function well but, rather, the ways in which they manage their conflicts. One way to manage conflict is to "screen out" painful feelings, thoughts, and perceptions by narrowing one's focus. Thus, on Rorschach's test, one would expect that a restricted focus, as indicated by fewer responses, would be associated with a relatively positive affective tone and, likewise, that a more contemplative approach, allowing more room for different sorts of feelings to come up, would be associated with a less positive affective tone.

Finally, the issue of consistency in the expression of personality variables needs to be addressed. Tellegen (1988) proposes that two people with the same "amount" of a trait can differ substantially in their traitedness for that trait, i.e. in the

consistency with which they express that trait. The individual who is lower on traitedness for that particular trait will be, on the whole, more susceptible to mood or situational factors than the person who is more highly traited for that trait. If this is true, then administering the Rorschach and the MPQ on different days would make the process of construct validation more difficult. It's impossible to know to what degree a low correlation between the measures is a reflection of their true relationship and to what degree it is due to inconsistency in the individual's expression of the trait in question--in this case, expectations about the world. Therefore, although administering both measures in a single testing session would require greater endurance on the part of both the subject and the examiner, it may be a better way of investigating the degree to which measures like the Rorschach and the MPQ are tapping into the same underlying construct.

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VITA

Greta Hunter was born in Salem, Oregon, on October 27, 1960. She attended elementary schools in Oregon, California, and Washington and graduated from high school in 1978. She entered the University of Washington in 1981 and, in June, 1985, graduated magna cum laude with a Bachelor of Arts degree in Psychology.

In September, 1987, she entered the doctoral program in clinical psychology at the University of Tennessee, Knoxville. She received the Doctor of Philosophy degree, with a major in Psychology, in August, 1994.