

The Rorschach Rating Scale: Item Adequacy, Scale Development, and Relations With the Big Five Model of Personality

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This study first explored the adequacy of items on the Rorschach Rating Scale (RRS), which measures Rorschach constructs from a variety of scoring systems. Analyses determined that all items had an adequate capacity to differentiate people and none were clearly redundant. At the same time, the current version of the RRS requires good reading comprehension skills for accurate completion (13th grade level). Next, we developed two sets of RRS scales. Factor analysis of observer ratings ($N = 234$) indicated the RRS contained six broad, empirically derived factors. In addition, 19 conceptually derived scales were developed from the RRS item pool. Both sets of scales were evaluated for reliability and then compared to the Big Five model (B5M) of personality through a series of factor and regression analyses. Results indicated that RRS scales do not provide adequate definition of all B5M dimensions and B5M scales do not provide adequate definition of all RRS dimensions. We discuss the place of psychotic processes within a comprehensive model of personality and other implications from these findings.

The Rorschach Rating Scale (RRS) was recently developed as a criterion instrument for assessing the validity of a wide range of Rorschach scores (Meyer et al.,

1996). Items were created to quantify variables from many scoring systems, including the Comprehensive System (Exner, 1993), the Lerner Defense Scales (Lerner & Lerner, 1982), the Rorschach Defense Scales (Cooper, Perry, & Arnou, 1988), the Psychoanalytic Rorschach Profile (Burke, Friedman, & Gurlitz, 1988), the Ego Impairment Index (Perry & Viglione, 1991), the Mutuality of Autonomy Scale (Tuber, 1992; Urist, 1977), Kwawer's (1980) scores for primitive modes of relating (Gacono, Meloy, & Berg, 1992), Gacono and Meloy's aggressive scores (Gacono & Meloy, 1994), and the Rorschach Oral Dependence Scale (Bornstein, 1993; Masling, Rabie, & Blondheim, 1967). Considerable effort was devoted to writing items that were accurate verbal descriptions of the construct believed to be measured by each Rorschach score (see Meyer, 1996a, for details regarding RRS development). Although the RRS was initially conceived as a scale to be completed by experienced clinicians, it can also be used by other types of raters (e.g., spouses, parents, peers) or in a self-report format.

The RRS is not intended to be a stand-alone assessment instrument. Rather, it is a tool to collect criterion data in Rorschach validation research. For instance, to validate the Comprehensive System's Deviant Response score, the RRS contains the criterion item, "Without clear external structure, or under the press of strong feelings, this person's thinking is loose, tangential, rambling, or flighty." Similarly, to validate the Comprehensive System score for Vista responses, the RRS contains the item, "At least below the surface, this person is very self-critical and has painful feelings about him/herself." To validate a facet of Masling's Oral Dependence Scale, the RRS contains the criterion item, "This person sees him/herself as powerless and ineffectual. S/he believes others are stronger and have more control of how situations turn out." As a final example, to validate either Kwawer's (1980) scoring for primitive modes of relating or the Psychoanalytic Rorschach Profile score for differentiated object relations, the RRS contains the item, "This person establishes relationships that have a merged quality. S/he seems to lose touch with other people's individual distinctiveness, identity, and personal motivations." To minimize the confounds of method-specific variance, when the RRS is used in validation research, criterion ratings should be aggregated from several lay raters who know the patient well or from an expert clinician who has followed the patient over time and familiarized himself or herself with all available information about the patient (Meyer, 1996a).

Even though the RRS serves a focused purpose as a criterion instrument for Rorschach validation, research on both its psychometric and conceptual properties are desirable. Psychometrically, we sought to answer three questions: (a) Does the RRS contain items that are of little value for discriminating among people?, (b) Can the scale be shortened by eliminating redundant items?, and (c) What level of reading skill is required to complete the scale accurately?

We also address two theoretical issues. The first has practical implications for research employing the RRS; the second has a more abstract emphasis on models

of personality structure. With respect to the first issue, we consider how RRS item constructs can be organized into conceptually broader scales. To the extent that meaningful RRS scales can be constructed on either rational or empirical grounds, the results provide a strategy for combining actual Rorschach scores in a manner that may maximize validity coefficients in applied research (Meyer, 1996a).

The second conceptual issue we explore is whether RRS constructs are distinct from the constructs contained within other models of personality. In many respects, the item content of the RRS reflects a Rorschach-based "model" of personality. This is because the RRS draws on constructs from most of the scoring systems in current use and because each RRS item is tied to a Rorschach score that, over the years, has been inductively or deductively linked to some seemingly important manifestation of personality and psychopathology. The resulting "model" of personality has well-defined roots in the clinical observation of psychiatric patients and in psychodynamic theories of personality. Furthermore, because the Rorschach has been one of the most frequently used instruments in applied clinical practice (Camara, Nathan, & Puente, 1998; Piotrowski & Keller, 1992; Watkins, Campbell, Nieberding, & Hallmark, 1995), the constructs derived from the Rorschach represent some of the most consistently employed constructs in applied clinical psychology.

Emerging from a very different tradition of factor analytic research on normal personality and the trait-descriptive words encoded in lay language, the five-factor model (Costa & McCrae, 1992a, 1992b, 1995; McCrae & Costa, 1997) and the closely related Big Five model (B5M; Goldberg, 1990, 1992) have produced a dominant framework for understanding personality. Although slight disagreements exist between these two models, because of their scope, cross-cultural replication, and consistent validation, their framework is the closest psychology has come to developing a research-based paradigmatic understanding of personality.

Because the Rorschach-based assessment of patients and the factor analytic study of normal personality reflect two very different but popular approaches to understanding personality, we sought to determine whether the RRS measured constructs that were similar to those that have emerged from the factor analytic tradition. In particular, we were interested in whether the RRS defined clinical constructs (e.g., psychosis) that may not have been incorporated into a model with roots in the study of normal personality characteristics.

METHOD

Participants

We solicited raters for this study from two settings. The first was a forensic treatment center in which seven master's-level social workers generated ratings on a final sample of 89 patients (see text following for exclusion criteria). The target

patients were all men and they were predominately Caucasian (46.1%) or Hispanic (37.1%), although African Americans (14.6%) were also represented. The patients had an average age of 37.3 years (range = 22–63). Diagnostic, offense, and history information were not recorded for each patient. However, all were in a low-security setting and had been referred for treatment due to a substance abuse disorder.

Four of the raters for this sample were male; five were Caucasian and two were Hispanic. They had a mean age of 30.9 (range = 24–47). Overall, the raters had known their target patients for an average of 6.2 months ($Mdn = 4.0$). Approximately 40% of the raters had contact with their target patients for 0 to 3 hr per week, another 40% had contact for 4 to 8 hr per week, and the final 20% had contact for 9 to 16 hr per week. Using a Likert scale, 65% of the ratings were from raters who said they knew the target patient “a little,” 24% who knew the patient “pretty well,” and 3% who knew him “very well.” In 8% of the ratings, this item was omitted.

After excluding invalid data (see the following), the second subsample of raters consisted of 157 students from the University of Alaska Anchorage. The raters were predominately female (80%) and Caucasian (77.1%; 6.4% were African American, 4.5% Hispanic, 4.5% Alaskan Native or North American Indian, 2.5% Asian, and 4.5% other). They had an average age of 28.4 years (range = 18–58). These raters were instructed to select a target person they knew well and, given the clinical focus of the RRS, they were encouraged to rate someone who had psychological difficulties. Of the target participants, 52% were male and the mean age was 29.2 (range = 14–63). In relation to the rater, the targets were friends (49.1%), spouses or live-in partners (23.3%), classmates (11.3%), siblings (10.7%), co-workers (8.9%), or children (3.1%). Raters had known the targets for an average of 8.8 years ($Mdn = 6.0$; range = 2 months–54.6 years). Most raters (55.9%) spent 30 or more hours per week with the target person and most raters (56.7%) felt they had an “excellent” knowledge of the person they rated.¹

¹This study was designed to obtain a large and heterogeneous sample of target participants. Our intent was to combine both subsamples into one large data set, even though they were obtained from very different sources. However, on the advice of a reviewer, we examined differences between these two subsamples. Without the need for statistical tests, the samples obviously differed on several variables, including sex, criminal status, rater–target relationship, race, and age. The reviewer hypothesized that sample differences may have created an artificially large first factor in our RRS data. Specifically, if the student raters examined “agreeable, conscientious, relaxed friends and intimates,” whereas the clinicians rated “disagreeable/hostile, careless/sloppy, neurotic forensic patients,” this would artificially force the first RRS principal component to be unusually large. The most direct way to evaluate whether this sampling phenomenon affected the data was to compare the first principle component after it had been generated in three ways: from the full sample, from the student-rater sample, and from the clinician-rater sample. This analysis was complicated because the number of participants in the last two analyses were less than the number of RRS items, which forced all eigenvalues to be zero when the root surpassed the number of participants. Despite this complication, the first unrotated principal component from the full sample correlated at .9998 with its counterpart in the student-rater sample ($n = 149$) and at .9445 with its counterpart in the clinician-rater sample ($n = 75$). Thus, the nature of the first com-

Materials

The RRS contains 262 items,² which are divided into two sections. The second section contains 77 items that address the Comprehensive System indexes developed to assess suicide, depression, coping deficits, psychosis, hypervigilance, and obsessiveness (see Meyer, 1996a, for a detailed description). The first section of the RRS contains 185 items that assess constructs derived from a variety of Rorschach scoring systems. These items are the focus of this article. A complete list of these 185 items can be found in Appendix A, along with an indication of the Rorschach score(s) each item was designed to measure. Nine of the first 185 items are validity indicators for assessing random or inconsistent responding. Four items ask about extremely high or low frequency behaviors (e.g., "This person is able to breathe on a regular basis."), and five are repeated items. Thus, out of the first 185 RRS items that are the focus of this study, only 176 are legitimate, nonduplicated items.

To assess the five-factor analytic dimensions of personality, we created a 50-item inventory, with each dimension defined by 10 items. The 10 markers for each dimension were selected from Goldberg's (1990, 1992) and Saucier's (1994) extensive research on the B5M. Using the data from Table 3 in Goldberg (1992) and Table 2 in Saucier, two interrelated criteria were employed to select marker terms for each factor. First, we selected terms that had a maximal loading on one of the five primary dimensions and small loadings on the other four. Second, to avoid artificially defining dimensions by using semantic polarities, we tried to avoid sim-

ponent did not vary much from subsample to subsample. Nonetheless, mean differences existed on the first unrotated principal component in these two subsamples (student rater $M = -0.160$, $SD = 1.13$; clinician rater $M = 0.318$, $SD = 0.54$; $t[221.38] = -4.28$, $p < .001$). To make the latter meaningful, the result can be considered in terms of the familiar T -score metric, as used on the MMPI. Employing this terminology, the student raters produced a mean score on the first factor equivalent to a T score of 48.4; the clinician raters produced a mean equivalent to a T score of 53.2. Thus, although the difference is statistically significant, it is rather negligible. The fact that we asked the student raters to describe someone with psychological difficulties may partially account for the lack of dramatic differences on this variable. A second set of analyses were conducted to explore subsample differences on the B5M scales. We examined both unit-weighted item scales and factor scores. The samples did not differ on N . However, statistically significant differences were evident for I/O, E, A, and C, with the students being higher on all constructs. Averaged across the analyses for factor scores and item scales, the differences expressed in terms of Cohen's d were .97, .68, .42, and .39, respectively. The T -score equivalents, centering the constructs at a mean of 50 and listing the value for the student raters followed by the value for the clinician raters, would be I/O = 45.15 versus 54.85, E = 46.6 versus 53.4, A = 47.9 versus 52.1, and C = 48.1 versus 51.9. The student raters selected targets who were clearly higher on intellect/openness, more extraverted, and somewhat more agreeable and conscientious. Nonetheless, because the targets in the student subsample were very unlikely to reflect a nonpatient group and because diagnostic information was not collected for the incarcerated substance abusers, no further descriptive data are presented for the RRS and B5M scales in these subsamples.

²Copies of the RRS can be obtained by contacting any of the scale authors. Also, Meyer (1996a) erroneously reported the RRS contained 263 items rather than 262.

ple antonyms (e.g., “creative” to define one pole and “uncreative” to define the opposite pole). The items for neuroticism³ (N) were anxious, emotional, fearful, irritable, jealous, moody, nervous, temperamental, touchy, and (–) relaxed. Extraversion (E) was defined by assertive, energetic, extraverted, talkative, verbal, (–) introverted, (–) quiet, (–) reserved, (–) shy, and (–) withdrawn. Items for intellect/openness⁴ (I/O) consisted of artistic, bright, complex, creative, deep, innovative, intellectual, philosophical, (–) simple, and (–) unimaginative. The items for conscientiousness (C) were efficient, neat, organized, systematic, thorough, (–) careless, (–) haphazard, (–) inconsistent, (–) inefficient, and (–) sloppy. Agreeableness (A) items were agreeable, cooperative, helpful, kind, sympathetic, trustful, warm, (–) cold, (–) harsh, and (–) rude.

Procedures

Raters in both settings were given identical core instructions for completing the RRS and B5M items. For the RRS, raters were instructed to compare the target person to an “average person” and to make ratings based on what they believed was true of the target, regardless of whether the target would agree with this characterization. Raters were also told that judgments are frequently biased by global impressions. To counter this, they were encouraged to think about each item and recall as much relevant information as possible, taking into account their impressions and feelings, knowledge from all potential sources of information, and observations of behavior across different settings. Finally, raters were informed that the scale contained items to evaluate rating consistency and they were encouraged to be conscientious when completing the task. All items were rated on a 5-point scale ranging from 1 (*very uncharacteristic or definitely false*) to 5 (*very characteristic or definitely true*). The format for the B5M ratings followed Goldberg’s example (1992, Appendix A), although items were rated on a 5-point rather than 9-point scale. The options ranged from 1 (*very inaccurate*) to 5 (*very accurate*).

Data Integrity

Inconsistency. Four RRS items can identify highly deviant responses (e.g., a neutral or “true” response to: “This person has not slept at all for the past three months.”). Intermediate or deviant scores on any of these items indicated carelessness, and we eliminated these ratings. Out of an initial pool of 311 target ratings from

³In the B5M tradition, neuroticism is usually labeled by its opposite pole, emotional stability.

⁴This factor is viewed as “intellect” in the B5M and as “openness to experience” in the five-factor model. Although one of our marker terms (*bright*) more clearly falls in the B5M tradition, the remaining nine terms are consistent with the constructs assessed in both models (cf. Costa & McCrae, 1992b). Thus, for this study we use the hybrid terminology *intellect/openness* to refer to this factor.

both subsamples, the data from 52 were deemed unacceptable by this criteria—a remarkably high proportion, particularly because raters had been forewarned about our intention to look for inconsistency. Because most of the students were participating for course credit, we anticipated they would be more likely to treat the task carelessly. However, a similar proportion ($\approx 16\%$) was eliminated from both samples.

Next, we examined the five repeated RRS items and eliminated data from raters who provided “inconsistent” ratings ($n = 11$), with inconsistent defined as a deviation of 4 points on any item pair or greater than 2 points on more than one pair. Unexpectedly, the proportion of eliminated ratings was slightly higher in the clinical sample (6%) than in the student sample (3%). Further analysis revealed that all of the clinical ratings eliminated at this step were obtained from two of the seven raters. Although this led us to question the accuracy of the other ratings contributed by these two raters, we found no evidence that would differentiate the inconsistent ratings from their remaining ratings. Thus, despite some reservations, their other ratings were retained.

Missing data. Two sets of ratings were very incomplete (missing all B5M items and > 80 RRS items) and were excluded. In total, we excluded data for 65 participants (21%), leaving a final sample of 246. We conducted subsequent analyses on participants who had missing data for no more than 5% of the relevant items. For analyses limited to the B5M, the final sample consisted of 236 participants, none of whom were missing more than 2 items. For analyses limited to the RRS, the final sample consisted of 234 participants, none of whom were missing more than 9 items. For analyses using both the RRS and B5M, the final sample consisted of 224 participants (75 from the clinical raters, 149 from the student raters). In all factor analyses, we used mean substitution for those rare instances of missing values. In the B5M, RRS, and combined B5M and RRS data sets, the proportion of missing values were .00169, .00189, and .00156, respectively. Consequently, mean substitution should have had a trivial impact on the results while still allowing a maximum number of ratings to be incorporated into the analysis.

In the final sample, the average correlation among the five pairs of repeated items was .67. The correlation between the two 5-item composites was .81. Although the average correlation for the individual item pairs was lower than expected, the RRS is thematically organized into content domains so the results may indicate repeated items take on slightly different connotations when they appear in separate sections of the RRS.⁵

⁵We are not aware of other directly relevant research that has examined the correlation between single items repeated in an inventory. However, a potentially relevant comparison comes from the validation work conducted for the BDI-II (Beck, Steer, Ball, & Ranieri, 1996). The BDI and BDI-II were administered to 140 outpatients in counterbalanced order. Across 18 items common to both inventories, the average item-to-item correlation was .73, which is similar to the .67 value observed here. Although

Factor Analytic Procedures

Research has indicated the absolute number of participants in a factor analysis is more critical than a specific participant-to-variable ratio (Gorsuch, 1997; Guadagnoli & Velicer, 1988) because the statistical stability of the correlation matrix is more important than the number of variables being intercorrelated. For instance, simulation studies have shown that samples as small as 100 can be sufficient for the analysis of up to 72 variables, whereas samples as small as 150 can be sufficient for the analysis of 144 variables, provided that each analysis contains a sufficient number of high loading (i.e., $> .60$) variables to define each factor (Guadagnoli & Velicer, 1988). As detailed in the following text, one of our analyses (of the RRS items) contained 176 variables and 234 participants, whereas another (of the RRS items and 5 B5M scales) contained 181 variables and 224 participants. Although the number of variables in these matrices are larger than has yet been tested in a simulation study, we analyzed the matrices keeping in mind identifying factors would be difficult if they were defined by item loadings less than approximately $.40$ (Gorsuch, 1997). More specifically, Guadagnoli and Velicer recommend retaining factors or components if they are defined by four or more variables with loadings higher than $.60$, regardless of sample size, and retaining components defined by 10 to 12 variables with loadings higher than $.40$ if the sample contains more than 150 participants.

To identify the proper number of factors to extract, we relied on a modified form of Horn's parallel analysis, which is uniformly the most accurate criteria for identifying factors in a matrix (Zwick & Velicer, 1986). Parallel analysis retains all factors with eigenvalues larger than the average of parallel eigenvalues generated from random data matrices containing the same number of "subjects" and "variables" as the target analysis. For each of our data sets, we generated 25 parallel random data matrices and averaged the results to identify the size of the corresponding randomly generated eigenvalues. For instance, in our genuine data set, we had ratings on 236 participants for the 50 B5M items. To determine the proper number of factors to extract from this data set, we generated 25 random data sets, each containing 50 "variables" and 236 "subjects." Subsequently, for each random data set, we conducted a principal components analysis and recorded the magnitude of the 50 eigenvalues (i.e., the eigenvalue for the first root, second root, third

the results were similar, the Beck et al. findings benefited from two features not present in our RRS data. First, the BDI contains only 21 items. As such, the lag between an item and its counterpart on the second inventory in Beck et al.'s study was much shorter than the lag between repeated items on the RRS (the RRS has an average of 116 items that come between duplicate items). Second, all BDI items fall under the same content domain, which ensures that all raters will interpret the item consistently. On the RRS, all the repeated items appear in a different content area than the original. For instance, one item first appears in the Self-Concept section and later in the Interpersonal Beliefs, Representations, and Expectations section. Regardless of these differences, the magnitude of our item-to-item correlations may not be unusual.

root, etc.). Finally, across the 25 random data sets, we averaged the values observed for the first root, then the values for the second root, and so on. In the standard approach to parallel analysis, any eigenvalue from the genuine data set that exceeds the average of the corresponding eigenvalue from the random data sets is considered a genuine (i.e., nonrandom) factor and it is retained. Thus, if the genuine data set produces an eigenvalue for the third root that exceeds the average third root eigenvalue from the random data matrices, the third factor in the genuine data set is retained.

Although parallel analysis provides the most accurate criteria for identifying factors, it tends to overextract factors when the matrix contains complex variables (i.e., those with loadings on more than one factor), and it also tends to retain poorly defined factors (Glorfeld, 1995; Zwick & Velicer, 1986). These issues were evident in this study. For instance, when the 50 B5M items were factored, the traditional parallel analysis criteria indicated seven factors should be retained, rather than the five that would be expected on theoretical grounds. However, two of the seven factors were not well defined and did not meet the factor definition criteria Guadagnoli and Velicer (1988) recommended because they did not have four variables with loadings greater than .60 or 10 to 12 variables with loadings greater than .40. Retaining five factors from this matrix would have resulted in all factors being adequately defined. Had we modified the parallel analysis criteria so that genuine factors were defined as only those with eigenvalues that were larger than the average of the random 1st roots (i.e., those larger than the *largest* random factor), only five factors would have been recommended for extraction.

Similar findings were evident when the RRS items were submitted to a principal components analysis. Traditional parallel analysis criteria indicated nine factors should be retained. However, three of these factors were not well defined and did not meet the recommendations Guadagnoli and Velicer (1988) proposed. Had we once again modified the parallel analysis criteria so that genuine factors were defined as those with eigenvalues larger than the average for the largest random factor, six factors would have been recommended for extraction. All six of these factors met Guadagnoli and Velicer's factor definition criteria. Extracting seven, eight, or nine factors resulted in factors that did not meet these criteria.

As a result of these findings, we modified the parallel analysis criteria so genuine factors were defined as those with eigenvalues larger than the average eigenvalue from the largest factor in the random data matrices. Applying this criterion to all the factor analyses conducted for this study resulted in the extraction of an appropriate number of factors. Specifically, by following this definition, all analyses extracted components that were either defined by four or more varimax rotated variables with loadings greater than .60 or by 10 to 12 variables with loadings greater than .40. In each case extracting one or more additional factors, which would have been indicated by the standard parallel analysis crite-

ria, resulted in factors that did not meet the retention criteria Guadagnoli and Velicer (1988) recommended. Although we do not believe our altered guidelines for parallel analysis should be adopted by researchers in general, given the complex factor patterns in our data matrices, adopting this more stringent standard for defining the number of factors allowed us to use a fixed criterion that prevented the extraction of poorly defined factors. This modified criterion also ensured that factors extracted from the RRS would be at approximately the same degree of generality as those of the B5M. In other words, given that the modified criteria indicated five factors should be extracted from the 50 B5M items, employing the same criteria across all analyses ensured we did not compare more narrowly defined RRS factors to the broader, more comprehensive factors derived from the B5M.

RRS Item Analyses

To determine whether the RRS contained any obviously poor items that did not discriminate among people (i.e., items that were either highly or minimally characteristic of all people), we evaluated the range and standard deviation for each item. Using a priori criteria, an item was considered poor if any of the following were true: (a) the range was less than 4.0, (b) the median was less than 2.0 or greater than 4.0, or (c) the standard deviation was less than .75. No items met any of these criteria. Each item had a range of 4.0 and a $SD > .91$.

Although we did not develop criteria for rejecting items based on skew, only two items had skewness greater than $|1.0|$. Item 9, which had a skew value of 1.075, asks about the propensity to identify with superhuman characters or characters of mythic proportions. Item 160, which had a skew of 1.149, asks about experiencing pleasure in the suffering of others. Because both items assess highly unusual characteristics, we were not surprised that their distributions were somewhat skewed. (B5M items had no variables with skewness $> |.85|$.)

Items were also examined for redundancy. A priori we decided to scrutinize item pairs with a correlation greater than .79. The 176 RRS items produced 15,400 correlations. The highest correlation (.83) was obtained between items 87 and 88, which assess misperceptions due to anger and misperceptions due to any strong affect, respectively. Although conceptually similar, we believed the distinction between these items and the size of their correlation did not warrant deleting one of the pair. Seven other item pairs had correlations between .70 and .74. These item pairs were next to each other in the rating scale and addressed conceptually similar but not synonymous constructs (i.e., 5 & 6, 28 & 29, 88 & 89, 93 & 94, 132 & 133, 142 & 143, and 179 & 180). None of these pairs was considered sufficiently redundant to warrant deleting an item.

Development of RRS Scales

We took two distinct approaches to producing scales from the RRS item pool. The first was empirically driven and used exploratory factor analysis. The second was conceptually driven with subsequent refinement by item analysis.

Factor-derived scales. A principal components analysis was conducted with the 176 RRS variables. Both varimax and oblimin rotations were explored. For the oblimin rotation, we set the delta parameter at zero to allow maximal correlations among the factors. To identify the proper number of factors to extract, we generated 25 random matrices containing 234 “subjects” and 176 “variables.” The average largest eigenvalue from each random data set was 3.37, so we extracted all factors in the actual data set that had larger eigenvalues. This resulted in the extraction of six factors. The eigenvalues (and percent of variance explained) for the first 10 factors were: 44.65 (25.4), 8.73 (5.0), 7.79 (4.4), 5.71 (3.2), 4.38 (2.5), 4.22 (2.4), 3.29 (1.9), 3.06 (1.7), 2.85 (1.6), and 2.75 (1.6). Both the Bartlett test of sphericity ($\chi^2 = 34,849.19$, $p < .000005$) and the Kaiser-Meyer-Olkin index ($= .80$) showed the data were suitable for factoring.

Oblique rotation revealed that 3 of the 15 factor correlations were nontrivial (with magnitudes of $-.30$, $.38$, and $-.49$). However, we had difficulty interpreting one oblique factor because it had only a single loading greater than $.42$. This was not true in the varimax solution, where all factors were readily interpretable and all had seven or more variables with loadings greater than $.42$ (all also had 11 or more variables with loadings of $.40$ or greater). Additional considerations favored the varimax solution. The oblimin rotation required 49 iterations to achieve a stable solution, whereas the varimax rotation only required 18. Also, regression factor scores from the varimax rotation and the oblimin rotation showed a clear pattern of convergent (i.e., $r > .93$) and discriminant (i.e., $r < |.25|$) correlations. Given that the varimax rotation produced factors that were more clearly defined and easily interpreted than the oblimin rotation, and given that both solutions produced very similar factor scores, we decided to focus on the varimax rotated factors.

The first factor was unipolar and contained loadings greater than $.50$ from the following RRS items (in decreasing magnitude): 144, 85, 81, 161, 84, 160, 137, 147, 7, 142, 143, 83, 8, 136, 125, 105, 148, 141, 122, 184, 124, 162, 106, 107, and 145. Item content suggested this was a factor of Narcissism, Aggression, and Dominance. The second factor was also unipolar and contained loadings greater than $.50$ from the following items: 91, 89, 90, 92, 97, 93, 94, 75, 88, 95, 79, 78, 77, 87, 86, 51, 96, and 180. The items suggested this was a factor of Perceptual Distortions and Thought Disorder. The third factor was again unipolar and contained loadings greater than $.50$ from the following items: 132, 157, 115, 6, 134, 5, 4, 114, 169, 151, 177, 3, 117, 181, and 150. Item content suggested a Passive Dependence,

Vulnerability, and Inferiority factor. The fourth factor was bipolar. The more strongly defined pole had loadings greater than .40 from items 1, 13, 55, 61, 14, 166, 111, 32, 112, 56, 43, 165, 41, and 12, whereas the other pole had loadings greater than .40 from items 28, 22, 50, 24, and 29. This factor contrasted Emotional Health and Coping Effectiveness with Emotional Control Problems. The fifth factor was also bipolar. The more strongly defined pole had loadings greater than .40 from items 20, 154, 164, 19, 113, 130, 60, and 54, whereas the other pole had loadings greater than .40 from items 119, 118, 172, 126, 16, and 15. Item content suggested this was a factor of Social and Emotional Engagement versus Constriction. The final factor was unipolar. It contained loadings greater than .40 from items 62, 64, 63, 65, 66, 49, 44, 120, 17, 18, and 34. This appeared to be a factor of Intellectual Defenses and Obsessive Character.

Next, scales were generated for each factor by selecting items that had a pattern of strong convergence with one factor (i.e., loadings > .40) and smaller associations with the remaining factors (i.e., loadings < .30). Table 1 provides the item composition, coefficient alpha values, mean, and *SD* for these six scales. None of the scales had skewness greater than |.22|. The table indicates that several shorter scales have internal consistency estimates less than .80. Higher reliability values could have been obtained by using all the items previously listed. However, doing so would have produced scales that were less representative of the underlying factor because items with larger secondary loadings on other scales would have been included.

TABLE 1
Marker Items, Internal Consistency, Means, and Standard Deviations of
Factor-Analytically Derived RRS Scales

<i>RRS Factor</i>	<i>Total Items</i>	α	<i>M</i>	<i>SD</i>	<i>Marker Items</i>
1. Narcissism, Aggression, and Dominance	12	.87	30.99	9.24	7, 21, 73, 85, 99, 105, 107, 137, 144, 160, 161, 162
2. Perceptual Distortions and Thought Disorder	8	.80	21.81	6.13	37, 51, 52, 57, 74, 75, 76, 91
3. Passive Dependence, Vulnerability, and Inferiority	12	.85	32.54	8.64	6, 114, 115, 132, 134, 135, 150, 156, 157, 168, 169, 181
4. Emotional Health and Coping Effectiveness Versus Emotional Control Problems	7	.72	20.07	4.91	13, 14, 24, ^a 43, 55, 56, 61
5. Social and Emotional Engagement Versus Constriction	7	.67	23.42	4.35	19, 20, 60, 130, 154, 164, 172 ^a
6. Intellectual Defenses and Obsessive Character	7	.68	21.34	4.60	49, 62, 63, 64, 65, 66, 120

Note. $N = 234$. RRS = Rorschach Rating Scale.

^aReverse-scored item.

Conceptually derived scales. To identify items that would form cohesive constructs, the first author systematically reviewed the RRS content. An initial set of five scales was deliberately created to measure the B5M dimensions.⁶ Due to limitations in RRS item content, the resulting scales often emphasized a particular facet of the overall dimension rather than complete coverage of the construct. To reflect this, several of scales were given names that differed slightly from the names of their associated B5M dimensions. The upper portion of Table 2 provides the name, coefficient alpha, *M*, *SD*, and item composition for each of these five scales. No scale had skewness greater than $|.36|$.

Next, 14 additional scales were created from the remaining RRS items. These scales are presented in the lower portion of Table 2. None had skewness greater than $|.48|$. Initially, a small 15th scale was developed that contrasted a thinking versus feeling approach to problem solving. However, it failed to hold up during item analysis so was discarded. After generating the 19 conceptually derived scales, 29 RRS items remained that could not be organized into broader constructs.

B5M Scales

Several analyses used the 10-item B5M scales. In the current sample, coefficient alpha was as follows: N = .81, E = .86, I/O = .83, A = .91, and C = .84. The scales had the following means: 30.25, 33.19, 32.94, 34.96, and 33.07, respectively. *SDs* were as follows: 7.40, 7.96, 7.44, 8.73, and 7.39, respectively. No scale had skewness greater than $|.35|$.

Statistical Analyses

The following analyses proceeded in several steps. First, the RRS items were evaluated for readability. Next, a series of factor analyses evaluated the dimensional un-

⁶The first two authors independently rated each RRS item five times to indicate its degree of correspondence with each B5M dimension (i.e., first for N, then for E, etc.). Ratings were made on a 5-point scale that ranged from -2 (*strong inverse relationship*) to 0 (*independent of the B5M dimension*) to $+2$ (*strong positive relationship*). Because one of the authors was just becoming familiar with the B5M and RRS constructs, ratings proceeded in stages with discrepancies discussed after each stage. Initially, 10% of the items were rated (i.e., Items 1, 11, 21, 31, 41, etc.). At the second and third stages, another 10% of the items were rated (i.e., Items 2, 12, 22, etc., and 3, 13, 23, etc., respectively). The final stage consisted of independent ratings of the remaining items. Across the 124 items rated at the final stage, our agreement on the extent to which each RRS construct corresponded to each B5M construct was reliable. Using gamma, a measure of association for ordinal variables, coefficients ranged from .90 to .97 (across all RRS items, not just those rated at the last stage, coefficients ranged from .83 to .96). Percentage of exact agreement across RRS items was .77, .83, .84, .82, and .84, for N, E, I/O, A, and C, respectively. Finally, when agreement for an RRS item was defined as exact correspondence on at least three B5M dimensions and agreement within one point on the remaining two, we agreed on the classifications for 94.4% (117/124) of the RRS items.

TABLE 2
Item Composition, Internal Consistency, Means, and Standard
Deviations of Conceptually Derived RRS Scales

<i>RRS Scale</i>	<i>Total Items</i>	<i>α</i>	<i>M</i>	<i>SD</i>	<i>Item Composition</i>
Scales related to B5M constructs					
Neuroticism	21	.92	59.04	15.81	3, 4, 5, 6, 13, ^a 22, 23, 24, 25, 26, 28, 29, 46, 47, 132, 157, 165, ^a 169, 175, 177, 179
Extraversion–Sociability	9	.87	27.02	6.35	1, 27, ^a 110, 111, 112, 113, 119, ^a 154
Openness–Emotional Sensitivity	12	.71	37.3	6.63	11, ^a 12, 14, 15, ^a 16, ^a 17, ^a 18, ^a 38, ^a 164, 166, 167, 172 ^a
Agreeableness Versus Hostility	14	.87	47.32	10.10	30, ^a 31, ^a 81, ^a 84, ^a 99, ^a 118, ^a 120, ^a 121, ^a 122, ^a 130, 131, 139, ^a 160, ^a 161 ^a
Conscientiousness–Thoroughness	5	.76	15.30	3.91	41, 43, 45, 49, 171
Scales of other constructs					
Defensive Avoidance of Negative Affect	13	.81	36.20	7.96	62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 77
Polarized Self- and Object- Representations	12	.89	28.29	9.12	2, ^a 8, 9, 10, 128, 134, 135, 141, 142, 143, 146, 153
Diffuse Psychological Boundaries	10	.80	24.81	7.07	53, 96, 108, 109, 129, 140, 149, ^a 150, 151, 152
Perceptual Distortions	8	.91	21.14	7.70	86, 87, 88, 89, 90, 91, 92, 145
Narcissism	8	.89	22.00	7.46	7, 83, 85, 107, 136, 137, 144, 147
Effective Coping	6	.76	19.21	4.68	32, 33, 34, 37, ^a 61, 182 ^a
Dependent Needs for Others	6	.74	18.12	4.67	114, 115, 116, 117, 155, 156
Projection and Projective Identification	5	.76	13.57	4.36	80, 97, 125, 162, 163
Global, Vague, and Impressionistic Thinking	5	.74	13.69	4.01	44, ^a 50, 51, 52, 174
Formal Thought Disorder	3	.85	6.53	3.13	93, 94, 95
Gaps in Memory or Experience	3	.77	7.87	2.93	75, 76, 78
Emotional Spontaneity	2	.64	6.20	1.87	19, 20
Sexual Preoccupations	2	.82	5.49	2.20	104, 105
Attention to Small/Unusual Details	2	.55	5.47	1.97	48, 106

Note. *N* = 234. RRS = Rorschach Rating Scale; B5M = Big Five model.

^aReverse-scored item.

derpinnings of the RRS and B5M. Using several sets of variables, we examined how the factor structure changed as a function of initial conditions. Finally, a series of regression analyses examined the maximal extent to which one set of personality variables could predict the other. The results explored both the extent to which B5M scales predicted RRS scales and also the extent to which RRS scales predicted B5M scales. Because all these results were ultimately a function of the correlation among B5M and RRS scales, Appendix B presents a full matrix of intercorrelations with the relevant scales.

RESULTS

Readability of the RRS Items

To evaluate the reading level required for the RRS, we entered items into a word processing file, treating each item as a separate paragraph. Using the Grammatik program contained in WordPerfect for Windows 6.1 (Novell, 1994), several readability statistics were generated and compared to data for the California Child Q-Set (CCQ; Caspi et al., 1992) and the Minnesota Multiphasic Personality Inventory-2 (MMPI-2), Millon Clinical Multiaxial Inventory-II, Basic Personality Inventory, and Personality Assessment Inventory (Schinka & Borum, 1993).

The average number of syllables per word in the RRS is 1.89 and, on average, the RRS contains 16.19 words per sentence. Using the Flesch-Kincaid formula, the RRS was found to have a reading difficulty at the 13th grade level.⁷ These statistics show that the RRS is linguistically more complex than common self-report inventories. Schinka and Borum (1993) reported average syllables between 1.34 and 1.42, average words per sentence between 8.20 and 12.20, and average reading levels between the third and fifth grades. However, the readability of the RRS was quite comparable to the original CCQ, another scale often used with professional and lay raters. The original CCQ had a readability level that was well above the 11th grade, which was the upper limit of the scale used by Caspi et al. (1992).

RRS Factor-Derived Scales in the Context of B5M Items

To explore overlap between the RRS and B5M, we first conducted a principal components analysis of the 50 B5M items and the six RRS factor-derived scales

⁷For an intuitive comparison, the text in this article has 1.9 syllables per word, 23.42 words per sentence, and a Flesch-Kincaid grade level of 16. The Flesch-Kincaid formula to compute grade level is $(0.39 \times \text{words per sentence}) + (11.8 \times \text{syllables per word}) - 15.59$.

(using the unit-weighted sum of items listed in Table 1, not factor scores). The eigenvalues (and percent of total variance explained) for the first 10 components in the initial solution were as follows: 11.25 (20.1), 6.45 (11.5), 4.07 (7.3), 3.22 (5.8), 2.56 (4.6), 2.10 (3.8), 1.83 (3.3), 1.41 (2.5), 1.29 (2.3), and 1.24 (2.2). A parallel analysis using 25 random data sets ($N = 224$, $k = 56$) with our modified criteria indicated eigenvalues greater than 2.13 should be extracted, so five factors were extracted and rotated to a varimax solution (see Table 3). These five factors were virtually identical to the factors that emerged when the B5M items had been factored in isolation (data not presented) with all factor score correlations exceeding .95.

Table 3 shows that the five expected B5M dimensions were clearly present. The first five factors reflect A, I/O, N, E, and C, respectively. With only a few exceptions, the B5M items loaded most strongly on their expected factors, providing support for the generalizability of these items as appropriate markers for the B5M dimensions.

The RRS factor-derived scales tended to have complex loadings on these dimensions, indicating that they shared conceptual overlap with more than one B5M construct. The only exception was RRS Factor 3, which measures Passive Dependence, Vulnerability, and Inferiority. This scale generated the highest loading on the N dimension, and it shared little variance with any of the other four dimensions.

RRS Factor 1 (Narcissism, Aggression, and Dominance) had a strong negative loading on A and a moderate positive loading on N. RRS Factor 2 (Perceptual Distortions and Thought Disorder) showed a similar pattern of associations, with a moderate positive loading on N and a moderate negative loading on A. The latter would not be predicted from the typical interpretations given to the N and A dimensions. RRS Factor 4 (Emotional Health and Coping Effectiveness vs. Emotional Control Problems) also had moderate loadings on A and N, with health and effectiveness being associated with the agreeable and emotionally stable poles of these dimensions. The variance in RRS Factor 5 (Social and Emotional Engagement vs. Constriction) was fairly evenly distributed among three of the B5M dimensions, having small to moderate positive loadings on A, I/O, and E. RRS Factor 6 (Intellectual Defenses and Obsessive Character) had a small positive loading on the C dimension. Although this was theoretically consistent, the small size of the loading indicates the RRS scale is substantially different from conscientiousness as it is defined in the B5M.

From the standpoint of direct convergence between the RRS factor-derived scales and the B5M, the N and A dimensions were adequately defined by RRS scales. The I/O dimension received a moderate loading from one RRS scale, although it did not provide decent coverage of the I/O dimension. No RRS scales had prominent loadings on the E or C dimensions, indicating that these constructs are not defined by the RRS factor scales.

TABLE 3
Factor Solution for the RRS Factor-Derived Scales in the Context of B5M Items

Variable	<i>h</i> ²	Factor Loadings				
		F1 (A)	F2 (I/O)	F3 (N)	F4 (E)	F5 (C)
A-cooperative ^a	.61	.76 ^b	.09	-.11	-.01	.10
A-sympathetic ^a	.63	.75 ^b	.25	.06	.03	.03
A-kind ^a	.71	.73 ^b	.30	-.07	.18	.23
A-warm ^a	.62	.71 ^b	.21	-.05	.22	.16
A-harsh ^a	.62	-.70 ^b	.20	.27	.12	.05
A-helpful ^a	.60	.68 ^b	.21	-.02	.13	.27
A-agreeable ^a	.54	.68 ^b	-.03	-.05	.14	.25
A-rude ^a	.61	-.67 ^b	.09	.35	.17	-.04
A-trustful ^a	.54	.65 ^b	.20	-.18	.09	.20
A-cold ^a	.48	-.64 ^b	-.02	.23	-.12	-.08
RRS Factor 1	.62	-.63	-.15	.43	.07	-.08
N-irritable	.56	-.50	.25	.49 ^b	-.04	-.06
N-relaxed	.29	.38	.11	-.35 ^b	-.11	.03
I/O-deep ^a	.61	.18	.74 ^b	-.01	.08	.18
I/O-creative ^a	.59	.30	.67 ^b	-.17	.11	.06
I/O-innovative ^a	.52	.23	.67 ^b	-.10	.06	.03
I/O-complex ^a	.49	-.25	.65 ^b	.03	.01	.03
I/O-intellectual ^a	.53	.25	.57 ^b	-.04	.08	.36
I/O-bright ^a	.52	.20	.54 ^b	-.13	.24	.34
I/O-philosophical ^a	.30	.07	.52 ^b	.01	-.10	.09
I/O-artistic ^a	.29	.12	.52 ^b	.02	-.03	-.06
E-assertive	.45	-.02	.50	-.15	.38 ^b	.18
RRS Factor 5	.50	.35	.47	.17	.34	.12
I/O-simple ^a	.24	.25	-.37 ^b	.11	-.16	-.08
RRS Factor 3	.53	-.01	-.23	.67	-.09	-.16
N-anxious ^a	.42	.04	-.02	.64 ^b	-.03	.09
N-nervous ^a	.46	-.13	-.15	.64 ^b	-.11	-.02
N-fearful ^a	.42	-.12	-.12	.59 ^b	-.20	-.01
N-jealous ^a	.46	-.34	.18	.55 ^b	.05	.00
C-inconsistent	.43	-.23	.07	.49	-.07	-.35 ^b
N-touchy ^a	.48	-.22	.43	.49 ^b	-.08	.00
N-emotional ^a	.50	.27	.27	.48 ^b	.35	-.10
N-moody ^a	.49	-.38	.33	.48 ^b	.10	-.05
N-temperamental ^a	.53	-.29	.46	.46 ^b	.15	-.06
RRS Factor 4	.44	.42	.08	-.46	.07	.17
RRS Factor 2	.40	-.40	-.16	.43	.03	-.17
I/O-unimaginative	.30	-.11	-.35 ^b	.38	-.08	-.13
E-shy ^a	.61	.10	-.07	.12	-.76 ^b	-.06
E-extraverted ^a	.59	.10	-.05	.05	.74 ^b	.14
E-quiet ^a	.59	.19	-.01	-.04	-.74 ^b	.05
E-reserved ^a	.59	.07	.00	.06	-.73 ^b	.22

(Continued)

TABLE 3 (Continued)

Variable	h^2	Factor Loadings				
		F1 (A)	F2 (I/O)	F3 (N)	F4 (E)	F5 (C)
E-talkative ^a	.50	.15	.20	.18	.64 ^b	-.01
E-introverted ^a	.45	-.05	.11	.16	-.63 ^b	.09
E-withdrawn ^a	.58	-.30	-.16	.29	-.61 ^b	-.06
E-verbal ^a	.56	.13	.38	.11	.60 ^b	.17
E-energetic ^a	.42	.23	.16	-.14	.48 ^b	.30
C-organized ^a	.68	.14	.04	.02	.05	.81 ^b
C-neat ^a	.54	.02	-.06	.07	.11	.72 ^b
C-efficient ^a	.59	.28	.25	-.03	.00	.67 ^b
C-systematic ^a	.55	.21	.27	.13	-.02	.64 ^b
C-thorough ^a	.59	.28	.32	-.02	.05	.64 ^b
C-sloppy ^a	.37	.00	.16	.28	-.04	-.52 ^b
C-haphazard ^a	.44	-.17	-.06	.41	.09	-.48 ^b
C-inefficient ^a	.35	-.16	-.16	.27	-.06	-.47 ^b
C-careless ^a	.37	-.24	-.15	.34	.11	-.40 ^b
RRS Factor 6	.19	-.18	.11	-.08	-.16	.34

Note. See Table 1 for RRS factor names. RRS = Rorschach Rating Scale; B5M = Big Five model; h^2 = final communality; N = Neuroticism; A = Agreeableness; I/O = Intellect/Openness; C = Conscientiousness; E = Extraversion.

^aVariable had its strongest loading on its theoretically expected factor. ^bFactor loading indicates the expected factor for each B5M variable.

RRS Conceptually Derived Scales in the Context of B5M Items

The next analysis examined the 50 B5M items and the 19 conceptually derived RRS scales. In the initial solution the first 10 components had the following eigenvalues (and percent of variance explained): 17.97 (26.0), 6.91 (10.0), 4.04 (5.9), 3.44 (5.0), 2.91 (4.2), 2.17 (3.1), 2.10 (3.0), 1.83 (2.6), 1.37 (2.0), and 1.31 (1.9). Using 25 random data sets ($N = 224$, $k = 69$) our parallel analysis criteria indicated that eigenvalues greater than 2.34 should be extracted, so we extracted five factors and rotated to a varimax solution (see Table 4).

Four of the dimensions reported in Table 4 were essentially the same as those reported in Table 3, having factor score correlations greater than .95. However, the correlation between N in Table 4 and N in Table 3 was lower ($r = .90$). This alteration in neuroticism was even more evident when factor scores from the solution reported in Table 4 were correlated with factor scores obtained when the B5M items had been factored in isolation. Although the A, C, and E dimensions were virtually synonymous ($r > .95$) and the I/O dimensions were similar ($r = .91$), the N dimensions were different, having a correlation of only .79 across solutions. Thus,

TABLE 4
Factor Solution for the Conceptually Derived RRS Scales in the Context of B5M Items

Variable	h^2	Factor Loadings				
		F1 (N)	F2 (A)	F3 (I/O)	F4 (C)	F5 (E)
RRS Neuroticism ^a	.78	.83 ^b	-.20	.02	-.22	-.08
Diffuse boundaries	.79	.80	-.33	-.11	-.17	.04
Polarized object representations	.78	.75	-.42	-.15	-.11	.03
Dependent needs	.56	.72	.16	-.00	-.13	-.04
Perceptual distortion	.69	.67	-.46	-.10	-.09	.11
Thought disorder	.53	.66	-.23	-.19	-.11	.00
Impressionistic thinking	.60	.65	-.27	-.08	-.28	.14
Effective coping	.63	-.62	.35	.15	.27	.19
N-nervous ^a	.40	.61 ^b	-.04	-.00	-.07	-.15
Narcissism	.69	.60	-.53	.00	-.19	.08
N-fearful ^a	.41	.60 ^b	-.03	.00	-.03	-.23
Projection	.67	.59	-.54	-.03	-.18	.02
Unusual details	.45	.57	-.34	.05	-.01	.11
Gaps in memory or experience	.37	.55	-.20	-.13	-.12	-.02
N-anxious ^a	.31	.53 ^b	.11	.12	.04	-.08
C-inconsistent	.44	.49	-.15	.18	-.37 ^b	-.08
N-jealous ^a	.40	.45 ^b	-.26	.35	-.07	.02
N-relaxed ^a	.30	-.44 ^b	.31	.03	.03	-.11
N-irritable ^a	.53	.43 ^b	-.41	.40	-.12	-.07
Sexual preoccupations	.25	.40	-.17	.12	.08	.22
I/O-unimaginative	.24	.36	-.06	-.24 ^b	-.20	-.12
Defensive avoidance of negative affect	.23	.34	-.28	-.12	.03	-.16
A-sympathetic ^a	.63	-.11	.75 ^b	.22	.07	.00
A-cooperative ^a	.60	-.25	.72 ^b	.02	.13	-.03
A-kind ^a	.70	-.20	.70 ^b	.23	.29	.17
RRS A Versus Hostility ^a	.80	-.56	.70 ^b	.03	.08	.02
A-warm ^a	.61	-.15	.69 ^b	.14	.21	.20
A-agreeable ^a	.56	-.08	.66 ^b	-.10	.30	.14
A-helpful ^a	.59	-.15	.66 ^b	.16	.31	.11
A-harsh ^a	.61	.28	-.65 ^b	.31	-.01	.11
A-rude ^a	.59	.37	-.60 ^b	.23	-.09	.16
A-cold ^a	.47	.28	-.60 ^b	.07	-.12	-.12
A-trustful ^a	.53	-.30	.60 ^b	.13	.25	.08
RRS E-Sociability	.71	-.52	.56	.17	.17	.26 ^b
RRS Openness-Emotional Sensitivity	.59	-.38	.49	.40 ^b	.12	.27
I/O-deep ^a	.59	-.13	.20	.69 ^b	.22	.08
I/O-complex ^a	.45	.00	-.22	.63 ^b	.06	.03
N-temperamental	.53	.32 ^b	-.21	.60	-.11	.12
I/O-innovative ^a	.47	-.19	.24	.60 ^b	.10	.07
N-touchy	.47	.33 ^b	-.14	.57	-.07	-.12
I/O-creative ^a	.48	-.22	.30	.55 ^b	.15	.12

(Continued)

TABLE 4 (Continued)

Variable	h^2	Factor Loadings				
		F1 (N)	F2 (A)	F3 (I/O)	F4 (C)	F5 (E)
I/O-philosophical ^a	.29	-.09	.08	.50 ^b	.12	-.10
I/O-intellectual ^a	.51	-.08	.24	.49 ^b	.45	.09
I/O-artistic ^a	.25	-.04	.15	.47 ^b	-.01	-.02
E-assertive	.45	-.24	-.04	.47	.20	.37 ^b
N-moody	.47	.41 ^b	-.29	.45	-.08	.07
I/O-bright ^a	.50	-.16	.19	.44 ^b	.42	.26
N-emotional	.50	.35 ^b	.36	.37	-.12	.31
Emotional spontaneity	.36	.20	.34	.35	-.07	.29
I/O-simple ^a	.23	.12	.25	-.34 ^b	-.11	-.18
C-organized ^a	.61	-.03	.12	.05	.77 ^b	.02
C-efficient ^a	.59	-.09	.26	.20	.69 ^b	-.02
C-neat ^a	.45	.04	.01	-.03	.66 ^b	.08
C-thorough ^a	.58	-.10	.26	.28	.65 ^b	.03
C-systematic ^a	.54	.07	.22	.27	.64 ^b	-.04
C-haphazard ^a	.44	.37	-.08	.05	-.54 ^b	.07
RRS C-Thoroughness ^a	.52	-.40	.25	.16	.52 ^b	-.02
C-inefficient ^a	.35	.26	-.11	-.08	-.51 ^b	-.06
C-sloppy ^a	.36	.21	.06	.22	-.51 ^b	-.05
C-careless ^a	.38	.38	-.17	-.07	-.43 ^b	.11
E-shy ^a	.61	.09	.09	-.05	-.07	-.77 ^b
E-quiet ^a	.60	-.11	.15	-.03	.02	-.75 ^b
E-extraverted ^a	.57	.05	.12	-.04	.12	.73 ^b
E-reserved ^a	.58	.03	.05	-.00	.21	-.73 ^b
E-introverted ^a	.45	.14	-.04	.12	.08	-.64 ^b
E-talkative ^a	.51	.18	.20	.20	.03	.63 ^b
E-withdrawn ^a	.57	.33	-.27	-.09	-.10	-.61 ^b
E-verbal ^a	.54	.04	.17	.39	.17	.57 ^b
E-energetic ^a	.42	-.18	.21	.13	.31	.47 ^b

Note. Table 2 provides the full name for each RRS scale. RRS = Rorschach Rating Scale; B5M = Big Five model; h^2 = final communality; N = Neuroticism; A = Agreeableness; I/O = Intellect/Openness; C = Conscientiousness; E = Extraversion.

^aVariable had its strongest loading on its theoretically expected factor. ^bFactor loadings indicate the expected factor for each B5M variable.

although N in Table 4 shared many core elements with N as it is traditionally defined in the B5M, adding the 19 RRS scales to the 50 B5M items shifted the definition of this dimension in the combined analysis.

As indicated in Table 4, N was now the largest factor in the data set. This was because most of the conceptually derived RRS scales defined this dimension. In fact, 12 out of the 15 largest loadings (i.e., > .50) on this factor were from RRS scales, suggesting that these scales generally quantify more "intense" neurotic

qualities than the individual B5M items. Table 4 also shows that N was now defined by more flagrant psychotic symptomatology, including the Diffuse Psychological Boundaries, Perceptual Distortions, and Formal Thought Disorder scales. Thus, adding the 19 RRS content scales to the factor analysis changed the nature of the neuroticism dimension so that it was defined by more severe symptomatology, including psychotic processes.

Adding the 19 RRS conceptually derived scales into the correlation matrix also caused some B5M neuroticism items to “migrate” onto the I/O dimension. The I/O dimension now defined a more mercurial set of characteristics given that the terms temperamental, touchy, and moody were more strongly associated with the terms complex, creative, artistic, and innovative. Two of the RRS scales, the Openness–Emotional Sensitivity scale and the Emotional Spontaneity scale, had small to moderate loadings on the I/O dimension.

The second factor in Table 4 is the agreeableness dimension. As anticipated, the RRS scale of Agreeableness versus Hostility provided strong definition for this dimension. The RRS scales of Extraversion–Sociability and Openness–Emotional Sensitivity also had strong loadings on A. The negative pole of the A dimension (i.e., antagonism) received moderate to strong secondary loadings from four RRS scales: Polarized Self- and Object-Representations; Perceptual Distortions; Narcissism; and Projection.

The fourth factor in Table 4 was quite clearly defined by the appropriate B5M items for conscientiousness and also by the RRS Conscientiousness–Thoroughness scale. The fifth factor, E, did not receive strong loadings from any RRS scales, although Extraversion–Sociability, Openness–Emotional Sensitivity, and Emotional Spontaneity provided small secondary loadings.

Overall, from the standpoint of conceptually derived RRS scales converging with the B5M, the RRS scales for Neuroticism, Agreeableness versus Hostility, and Conscientiousness–Thoroughness were good markers for their respective B5M dimensions. The RRS content scales did not provide good markers for the extraversion or intellect/openness dimensions.⁸

B5M Scales in the Context of RRS Items

In any factor analysis, the ability to identify factors is contingent on shared variance in the data matrix because common factors can only emerge when

⁸At the conclusion of this study, we tried to improve the RRS scales for E, I/O, and C by correlating each B5M scale with all the RRS items to look for a pattern of convergence and discrimination. Two items could have been added to the RRS Conscientiousness scale (Items 44 and 52-reversed). They slightly improved coefficient alpha (from .76 to .80) but did not improve on the factor analytic results reported in Table 4. We found no items that would have been valuable additions to the Extraversion or Intellect/Openness scales.

enough variables share construct overlap and empirical redundancy. As the preceding analysis demonstrated, the extent to which certain content is emphasized in the selection of variables is pivotal for determining the presence and size of the factors that are eventually extracted. So far we have examined a relatively small number of RRS variables in the context of many B5M variables. Therefore, our analyses “favored” B5M constructs. For the next analysis we reversed the emphasis, examining the five B5M scales in the context of all 176 RRS items.

A parallel analysis (25 random data sets, $N = 224$, $k = 181$) with modified criteria indicated that six factors were present in the actual matrix, so six factors were extracted and rotated to a varimax solution (a full table is available from the first author). These six factors were virtually identical to those identified when RRS items were factored in isolation, with all factor score correlations exceeding .97. As such, these six factors directly correspond to the factors described in the Methods section and listed in Table 1.

As would be expected, the B5M A scale had a strong inverse loading ($-.62$) on the RRS dimension of Narcissism, Aggression, and Dominance. The A scale also had small to moderate loadings on two other RRS dimensions: Perceptual Distortions and Thought Disorder ($-.38$) and Social and Emotional Engagement versus Constriction (.30).

Not surprisingly, the B5M E and I/O scales had strong positive loadings (.58 and .57, respectively) on the RRS dimension of Social and Emotional Engagement versus Constriction. The B5M E and I/O scales did not have salient loadings (i.e., $> .25$) on other factors.

The variance in the B5M N scale was distributed among three of the six RRS factors. It had moderately strong associations with the Emotional Health and Coping Effectiveness dimension ($-.46$); the Passive Dependence, Vulnerability, and Inferiority dimension (.40); and the Narcissism, Aggression, and Dominance dimension (.39). The N scale did not have a salient loading on the RRS factor of Perceptual Distortions and Thought Disorder (.25).

The B5M C scale also had its variance distributed across several factors, although all loadings were relatively small. The C scale had a small to moderate loading on Narcissism, Aggression, and Dominance ($-.36$), a small loading on Social and Emotional Engagement versus Constriction (.31), and a small loading on Intellectual Defenses and Obsessive Character (.23).

Overall, from the standpoint of B5M scales converging with the RRS, A (reflected) was a good marker for the Narcissism, Aggression, and Dominance dimension, and the E and I/O scales in combination could form a good marker variable for the dimension of Social and Emotional Engagement. The B5M did not provide good marker scales for Perceptual Distortions and Thought Disorder; Passive Dependence, Vulnerability, and Inferiority; Emotional Health and Coping Effectiveness; or Intellectual Defenses and Obsessive Character.

Predicting One Model From the Other

Finally, to examine the maximum extent to which B5M scales could predict the RRS and vice versa, we conducted a series of regression analyses. Our analyses examined three sets of RRS scales: (a) the 6 factor-based scales that were computed from the raw sum of items listed in Table 1, (b) the factor scores corresponding to the 6 RRS factors, and (c) the 19 conceptually derived scales listed in Table 2. We also examined two sets of B5M scales: (a) the five B5M factor scores, and (b) the five B5M scales computed from the unit-weighted sum of raw scores.

The first set of regression analyses predicted RRS scales from B5M scales, using forced entry of all five B5M variables. Because the B5M factor scores produced results that were essentially equivalent to those found with the raw scales computed from the sum of B5M items, only results for the raw scales are reported. From the results in Table 5, we see that on average, the B5M produced a multiple R of .52 when predicting the RRS factor scores, a multiple R of .57 when predicting the six-factor analytically derived RRS scales, and a multiple R of .62 when predicting the conceptually organized RRS scales.

Table 6 presents the analyses in reverse, using the RRS scales to predict the B5M scales. Because there were more notable differences between factor scores and scales, results are presented for both sets of variables. In general, the RRS factor scores are slightly more effective predictors than their corresponding scales. However, in general, predicting B5M factor scores is also more difficult than predicting B5M scales. On average, the RRS scales produced a multiple R of .51 when predicting B5M factor scores and a multiple R of .62 when predicting B5M scales. In contrast, the RRS factor scores had average multiple R s of .57 and .67 when predicting B5M factor scores and scales, respectively. On average, the RRS conceptually derived scales had a multiple R of .63 when predicting B5M factor scores and a multiple R of .71 when predicting the B5M scales.

Considering both Tables 5 and 6, one can see that the RRS did a better job predicting the B5M than the B5M did predicting the RRS. The latter was not simply because the RRS contains more potential predictor variables than the B5M (i.e., six factors rather than only five). To explore the latter, we recomputed the factor-based RRS prediction equations in Table 6 after equating RRS and B5M predictive potential by dropping the last RRS factor from the regression procedures. Following this, the average ability of the RRS to predict the B5M only dropped slightly with multiple R s declining by .01 to .03 (e.g., the average R for predicting B5M scales from RRS factor scores changed from .67 to .66).

DISCUSSION

The RRS does not contain any poor items that fail to discriminate among people, and it does not contain any clearly redundant items. However, grammatical statis-

TABLE 5
Prediction of RRS Scales From Forced Entry of All B5M Scales

<i>Criterion Scale</i>	<i>R</i> ²	<i>R</i>
RRS Factor-Derived Scales		
1. Narcissism, Aggression, and Dominance	.53	.73
2. Perceptual Distortions and Thought Disorder	.30	.55
3. Passive Dependence, Vulnerability, and Inferiority	.34	.58
4. Emotional Health and Coping Effectiveness	.41	.64
5. Social and Emotional Engagement	.37	.61
6. Intellectual Defenses and Obsessive Character	.11	.33
<i>M</i>	.34	.57
RRS Factor Scores		
1. Narcissism, Aggression, and Dominance	.41	.64
2. Perceptual Distortions and Thought Disorder	.14	.37
3. Passive Dependence, Vulnerability, and Inferiority	.36	.60
4. Emotional Health and Coping Effectiveness	.25	.50
5. Social and Emotional Engagement	.49	.70
6. Intellectual Defenses and Obsessive Character	.11	.33
<i>M</i>	.29	.52
RRS Conceptually Derived Scales		
RRS Neuroticism	.58	.76
RRS Extraversion–Sociability	.58	.76
RRS Openness–Emotional Sensitivity	.46	.68
RRS Agreeableness Versus Hostility	.65	.81
RRS Conscientiousness–Thoroughness	.43	.65
Defensive Avoidance of Negative Affect	.12	.35
Perceptual Distortions	.41	.64
Diffuse Psychological Boundaries	.50	.71
Polarized Self- and Object-Representations	.50	.71
Narcissism	.57	.76
Effective Coping	.48	.69
Global, Vague, and Impressionistic Thinking	.39	.62
Formal Thought Disorder	.26	.51
Gaps in Memory or Experience	.19	.43
Emotional Spontaneity	.22	.47
Dependent Needs for Others	.31	.55
Projection and Projective Identification	.51	.71
Sexual Preoccupations	.12	.35
Attention to Small/Unusual Details	.30	.54
<i>M</i>	.40	.62

Note. $N = 224$. RRS = Rorschach Rating Scale; B5M = Big Five model. The final R and R^2 values were quite similar when B5M factor scores were used rather than B5M scales derived from the sum of raw scores. Consequently, results for the B5M factor scores were not presented.

TABLE 6
Prediction of B5M Scales From Forced Entry of RRS Scales

Type of Criterion and Predictors	Criterion Scale					M
	N	E	I/O	A	C	
<i>R</i> ² values						
B5M factor scores						
RRS factor-derived scales	.39	.18	.23	.46	.11	.27
RRS factor scores	.45	.28	.32	.57	.12	.35
RRS conceptually derived scales	.53	.36	.29	.60	.27	.41
B5M scales						
RRS factor-derived scales	.53	.22	.30	.57	.32	.39
RRS factor scores	.58	.34	.39	.67	.35	.47
RRS conceptually derived scales	.62	.40	.37	.69	.45	.51
<i>R</i> values						
B5M factor scores						
RRS factor-derived scales	.63	.43	.48	.68	.33	.51
RRS factor scores	.67	.53	.57	.75	.35	.57
RRS conceptually derived scales	.73	.60	.53	.78	.52	.63
B5M scales						
RRS factor-derived scales	.73	.47	.55	.76	.57	.62
RRS factor scores	.76	.58	.62	.82	.59	.67
RRS conceptually derived scales	.79	.63	.61	.83	.67	.71

Note. *N* = 224. B5M = Big Five model; RRS = Rorschach Rating Scale. N = Neuroticism; E = Extraversion; I/O = Intellect/Openness; A = Agreeableness; C = Conscientiousness.

tics showed that accurate completion of the RRS requires a good vocabulary and 13th-grade reading comprehension skills. Although these requirements are higher than those for common self-report inventories (Schinka & Borum, 1993), they are similar to requirements for other observer-rating instruments such as the original CCQ (Caspi et al., 1992). The readability findings are also consistent with our initial intention to have the RRS completed by skilled clinicians (Meyer, 1996a), and clinicians with graduate education should be able to complete it without difficulty. However, one should exercise caution when obtaining RRS ratings from poorly educated lay raters.

College students generated about two thirds of the ratings used in this study, and we do not know what level of reading comprehension they possessed. Furthermore, the RRS asks about constructs that people without training in psychopathology may find difficult to evaluate in a differentiated and exact manner. Consequently, our sample may have produced somewhat unsophisticated ratings that may have led to a more diffuse pattern of relations among variables and, ultimately, to less differentiated factor structures. Surprisingly, the extent to which the factor structures for clinical constructs may vary as a function of rater skill and clinical acumen has not yet been the focus of systematic research (Block, 1995; Westen, 1995). Instead, virtu-

ally all relevant studies rely on the input of lay raters. Not only will it be valuable to replicate our analyses using experienced clinicians who are clearly familiar with the forms of psychopathology embodied in RRS constructs, but it will be important to explore the impact of rater sophistication on the factor structure of other clinical assessment instruments.

Our results indicated that RRS items can be organized into 19 conceptual scales or, based on our sample of raters, six broad factor scales. We developed these scales without regard to underlying Rorschach scores. Consequently, they are not simply derived from the Comprehensive System (Exner, 1993), but rather they emerge from all the scoring systems included in the RRS. Also, the data presented herein do not indicate the factor structures that would be found with actual Rorschach scores. Instead, the data show how constructs thought to be associated with the Rorschach are organized and interrelated in the minds of our raters. Many methodological differences exist between an observer-rating scale such as the RRS and the Rorschach task itself. Because method-specific variance has a pervasive impact on scores obtained from any assessment device (Meyer, 1996b, 1997; Meyer et al., 1998), it is unlikely that the factors observed in this study will have exact parallels in an analysis of actual Rorschach scores (see Meyer, 1992, for a review of the latter).

As indicated earlier, the item content of the RRS reflects a Rorschach-based "model" of personality because each item is tied to a score thought to capture an important manifestation of personality and psychopathology. In terms of correspondence between B5M and RRS personality constructs, the factor solutions and regression analyses indicated they shared some areas of substantial overlap. However, the RRS and B5M items also contained distinct information. Despite our deliberate efforts, the RRS did not provide good markers for the I/O or E dimensions of the B5M. Conversely, the B5M did not provide good marker variables for three of the six RRS dimensions: (a) Perceptual Distortions and Thought Disorder; (b) Passive Dependence, Vulnerability, and Inferiority; and (c) Intellectual Defenses and Obsessive Character.

When considering correspondence, one finding initially may seem paradoxical. RRS Factor 3 (Passive Dependence, Vulnerability, and Inferiority) was an excellent marker for N when RRS scales were factored with B5M items (Table 3). However, the relation was not symmetrical. When the B5M scales were factored with all the RRS items, the B5M N scale had moderate loadings on three RRS dimensions (Factors 1, 3, and 4). However, it was not a good marker for any of these, including Passive Dependence, Vulnerability, and Inferiority. Thus, even though RRS Factor 3 is a good marker for N, the reverse is not true because RRS items partition neuroticism variance into more narrowly defined constructs. As a result, N does not allow for the refined measurement of these more focused characteristics.

Given the preceding, future research could profitably examine whether model overlap is greater when the RRS is examined alongside more focused scales from the five-factor tradition. Currently, Costa and McCrae's (1992b) NEO-PI-R mea-

asures the five broad domains of personality, and it also contains more discrete facet scales for measuring important characteristics within each domain. Some NEO-PI-R facet scales for N, such as Vulnerability or Self-Consciousness, may show more direct correspondence with the RRS factors and scales.

This study also raised broader theoretical questions about the relation between neuroticism and psychotic operations with different analyses producing conflicting results about the link between these constructs. Table 4 showed that when the conceptually derived RRS scales were factored with the B5M items, the RRS scales that measure overt psychotic symptoms or psychotic level dynamics and defensive operations (i.e., Perceptual Distortions, Diffuse Psychological Boundaries, Polarized Self- and Object-Representations, Formal Thought Disorder, and Projection and Projective Identification) had prominent loadings on the neuroticism dimension. This analysis suggested that neuroticism is associated with constructs that extend well beyond the terms of emotionality and distress that historically have been considered the core markers for this dimension.

However, in other analyses, psychotic processes were relatively independent of N. When only the RRS items were factored (Table 1), psychotic processes defined a dimension distinct from the two RRS dimensions with more typical neuroticism content (Factors 3 and 4). Similarly, when the six factor-derived RRS scales were analyzed with the 50 B5M items (Table 3), the RRS factor of Perceptual Distortions and Thought Disorder had a moderate loading on the N dimension; it clearly did not define this dimension. Finally, when the five B5M scales were factored with all RRS items, the B5MN scale did not have a strong loading on the RRS factor of Perceptual Distortions and Thought Disorder. These analyses all showed psychotic symptoms defining a dimension of personality distinct from neuroticism.

Such conflicting findings raise questions about the scope of neuroticism and the place of psychotic symptomatology within a comprehensive model of personality. The research literature has also produced conflicting results on this point. Some studies found N associated with poor psychological boundaries and psychotic or quasi-psychotic experiences (e.g., Clark, Livesley, Schroeder, & Irish, 1996; Clark, Vorhies, & McEwen, 1994; McCrae, Costa, & Busch, 1986; Schroeder, Wormworth, & Livesley, 1994). Other studies found: (a) psychotic propensities had small or moderate correlations with N (Trull, Useda, Costa, & McCrae, 1995), (b) schizotypal characteristics or eccentric perceptions had strong loadings on I/O but not N (Clark et al., 1994; Wiggins & Pincus, 1994), (c) paranoia and schizotypal characteristics were most strongly associated with the negative pole of A (Yeung, Lyons, Waternaux, Faraone, & Tsuang, 1993), or (d) thought disorder was unrelated to any B5M dimensions (Costa & McCrae, 1992a; also see Harkness, McNulty, & Ben-Porath, 1995).

Several factors are likely to play a role in these discrepancies. First, disparities emerge when different scales are used to define psychotic constructs. Despite their names, some scales measure more diffuse symptomatology, including negative

emotional states (e.g., Scale 8 of the MMPI), whereas others measure more focused psychotic characteristics (e.g., the RRS Formal Thought Disorder scale). Second, even though several researchers have attempted to integrate models of normal personality with clinical models of psychopathology (e.g., Clark et al., 1996; Watson, Clark, & Harkness, 1994), most factor analytic studies have relied on self-ratings from nonpatients to generate data. We are not aware of any studies that have used expert clinician ratings as the factor analytic input to determine how more disturbed symptomatology fits within the B5M. Given this gap in the literature, some studies may have found strong associations between N and psychotic characteristics because the raters who generated scores did not have a sufficiently sophisticated understanding of the characteristics under consideration. To the extent that lay raters have an undifferentiated or skewed understanding of certain aspects of personality, this should influence the correlation among traits and subsequent factor analytic solutions.

Finally, for factor analytic studies, the prevalence of psychotic items (or scales) in the variable matrix may largely determine whether psychotic processes define a unique dimension of personality. This is because the content emphasized in an analysis determines the presence and size of the factors that will eventually be extracted (Block, 1995; Gorsuch, 1983). This phenomenon accounts for some disparities observed in this study. When the 176 RRS items were factored alone or in combination with the five B5M scales, the variable matrix contained a relatively large proportion of psychotic items and the data produced a clear factor of psychotic processes that did not receive strong loadings from N. However, as the proportion of psychotic level symptomatology in the variable matrix was reduced, the factor structures reflected this decreasing emphasis. When the number of marker variables for psychotic content was trimmed but not trivialized, as it was when the 19 conceptually derived RRS scales were factored with the 50 B5M items (Table 4), then the psychotic content was "squeezed" to fit on a redefined neuroticism dimension. Alternatively, when psychotic processes were represented by just a single scale in a matrix of more than 50 variables, as it was when the six RRS factor scales were examined with the 50 B5M items (Table 3), then the construct of psychosis no longer played an important role in the factor output.

Models of normal personality (e.g., Costa & McCrae, 1992b; Goldberg, 1990; McCrae & Costa, 1997; Tellegen, 1996; Wiggins, 1979) have not provided much definition for psychotic characteristics. However, clinicians have historically made important diagnostic and treatment-related distinctions between classic neuroticism traits such as dysphoria, anxiousness, or inadequacy, and more severe psychotic operations such as the loss of ego boundaries, thought disorder, perceptual distortions, projective identification, massive denial, or splitting (e.g., American Psychiatric Association, 1994; Blatt & Blass, 1990; Gabbard, 1990). To resolve the place of psychotic symptoms within a complete taxonomy that spans normal and abnormal personality, not only will researchers need to gather rating

data from experienced clinicians who are quite familiar with the full range of psychopathology, but also they will need to determine the appropriate ratio of psychotic symptoms to include in the matrix of primary variables under consideration. As our analyses demonstrated, altering the mix of variables has a dramatic impact on the factor analytic output.

Overall, the analyses conducted in this study further the utility of the RRS as an instrument to measure Rorschach constructs. To use the RRS with less educated lay raters, future efforts could explore the possibility of simplified language that retains the intended meaning of each item (cf. Caspi et al., 1992). Another fruitful direction would be to explore how scoring systems within the RRS (e.g., the Comprehensive System) may produce different factor solutions or conceptually derived scales. Alternatively, the scales generated in this study could be used as a guide for scoring Rorschachs in a manner that maximizes the coverage of a construct. For instance, if a researcher wished to measure narcissism, the scale listed in Table 2 suggests that combining scores from the Comprehensive System, Lerner Defense Scales, Rorschach Defense Scales, and Kwawer's primitive relationship scheme may be useful. Finally, and most important, undertaking studies that attempt to validate actual Rorschach scores using the RRS as a criterion measure in one of the optimal designs that have been proposed for cross-method validation would be valuable (Meyer, 1996a).

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APPENDIX A

First 185 Items From the Rorschach Rating Scale and the Rorschach Score(s) Each Item Was Designed to Measure

Self-Concept

1. This person has a healthy and positive sense of self-confidence. [Egocentricity Index]
2. This person holds beliefs about him/herself that are founded on actual past experiences and relationships (versus a self-concept based primarily on imagined or fantasized qualities). [$H:(H)+Hd+(Hd)$ ratio]
3. This person experiences him/herself as damaged, flawed, or hurt by life. [Morbid; Aggression-Past: $GM-AG$]
4. This person regards him/herself as inferior to others. [Egocentricity Index]
5. At least below the surface, this person is very self-critical and has painful feelings about him/herself. [SumV]
6. At a core level, this person feels vulnerable or fragile. [$An+Xy$]
7. This person strives to maintain an inflated belief in his/her personal importance or uniqueness (even though this effort may serve to counter feelings of inadequacy or inferiority). [$Fr+rF$]

8. Imagined or fantasized characteristics are central to this person's self-concept. These characteristics may be either positive or negative, although they cause him/her to think s/he has idealized, superhuman attributes or devalued, subhuman qualities. [$H:(H)+Hd+(Hd)$ ratio; Object Relations–Animation–Quasi-human: *PRP*]
9. This person identifies with superhuman or mythical characters from popular culture. These could include figures from music, movies, or sports, although they are not necessarily “positive” characters. [$H:(H)+Hd+(Hd)$ ratio; Object Relations–Animation–Quasi-human: *PRP*]
10. This person sees him/herself in black and white terms as either all “good” or all “bad.” His/her self-concept alternates between opposites that range from loving, powerful, important, nurturing, worthy, or kind, to hateful, weak, destructive, worthless, or rejecting. [Splitting: *LDS* or *RDS*]
11. This person's sense of self is fixed, rigid, routinized, and unable to adjust flexibly to the challenges in daily life. [Ego Structure–Boundary: *PRP*]

Emotional Experiences

12. This person is able to recognize many of the subtleties and nuances that characterize his/her feelings and motives. [Lambda; Blends]
13. This person can experience feelings of anxiety, helplessness, or distress in a healthy, insightful manner without becoming overwhelmed. [$FY:YF+Y$ ratio; Factor 4]
14. This person is sensitive to a range of emotions and is able to remain cognitively organized or composed when confronted with uncomfortable feelings. [Factor 4]
15. This person does not have strong or sustained emotions. [$WSumC$]
16. This person avoids becoming emotionally stirred up. [Affective Ratio]
17. This person withdraws from situations that generate strong feelings in him/her. [Affective Ratio]
18. This person tightly controls the way s/he experiences feelings. [$FC:CF+C$ ratio; $WSumC$]
19. This person is emotionally spontaneous and uninhibited. [$EB, FC:CF+C$ ratio; Factor 3]
20. This person is very responsive to emotional stimulation. [Affective Ratio]
21. This person's feelings shift rapidly and don't affect him/her deeply. [Impressionistic Response: Gacono]
22. This person occasionally reacts to situations with intense, poorly controlled feelings. [Pure *C*]
23. This person has emotional experiences that s/he finds very confusing. For example, s/he frequently feels both positively and negatively about the

- same thing and is unable to resolve this ambivalence. [Color–Shading Blends]
24. This person is bothered by distress or irritation that comes from internalizing or “holding in” feelings. [*SumC'*]
 25. This person frequently inhibits the expression of his/her feelings, and the tension from this strategy of emotionally “biting his/her tongue” results in irritability, emotional discomfort, or distress. [*SumC'*]
 26. This person is feeling anxious, tense, agitated, or helpless because of a current emotional crisis or because of transient environmental stress. [*Y+m; D* score]
 27. This person feels distant or isolated from others. [Isolation Index]
 28. This person experiences tension around losing control or exploding. [Explosion content]
 29. This person feels aggressive impulses, although these feelings are accompanied by tension or ambivalence. [*AG*]
 30. This person feels aggressive or combative impulses in his/her interactions. [*AG*]
 31. This person experiences powerful anger, which is characterized by images of consuming or violently destroying the person or thing that provoked him/her. [Impulses–Oral Aggressive: *PRP*]

Problem Solving and Coping

32. This person is flexible and has multiple ways of coping with stressful circumstances. [Complexity Index with *EII*]
33. This person has sufficient resources to consistently respond in some fashion to the routine, day-to-day events of life. [*EA* with *D* score]
34. This person has coping strategies that are not easily disrupted by stress. This does not mean that his/her coping strategies are effective or adaptive, but simply that these strategies persist despite considerable stress. [*D* score]
35. This person is quite economical in his/her approach to tasks and rarely becomes engrossed or emotionally caught up in activities. [*R* with Λ ; Factor 1; Factor 2a]
36. This person strives to achieve goals that may exceed his/her abilities. [*W:M* ratio]
37. This person does not have a consistent coping style and frequently shifts strategies, reverses judgments, or has difficulty reaching a firm decision. [*EB* (ambitious)]
38. This person oversimplifies situations as a basic way of coping. [Λ]
39. This person copes with problems by using feelings and intuitions to guide his/her decisions, judgments, and actions. [*EB* (extratensive)]

40. This person uses a “trial-and-error” approach to solving problems, such that different solutions or strategies are spontaneously employed and then altered. [*EB* (extratensive)]
41. This person copes with problems by thinking about circumstances and mentally evaluating possibilities before making decisions or judgments. [*EB* (introversive)]
42. This person has frequently traveled to the antarctic over the last year. [Random responding]
43. When problem solving, this person tends to make a judgment or take action only after thoroughly processing all relevant information. [*Zd*]
44. In general, this person is actively attuned to the environment and makes consistent efforts to organize and synthesize relevant information. [*Zf*]
45. When confronted with a task, this person becomes motivated and makes considerable efforts to organize and synthesize relevant information. [*Zf*]
46. This person’s coping resources are chronically overwhelmed (i.e., not simply because of a current crisis or acute stress). [*EA*; Adjusted *D* score]
47. This person cannot function effectively because s/he is temporarily overwhelmed by life stressors or emotional discomfort. [*D* score]

Cognitive Style

48. This person frequently focuses his/her attention on minor or unusual details. [*Dd*]
49. This person processes information in a careful, detailed, and meticulous fashion. [*Zd*]
50. This person quickly jumps to conclusions and sizes up situations without sufficient information. [*Zd*]
51. This person thinks about, perceives, and recalls events in a diffuse, vague, or impressionistic manner. [*DQv+DQv/+*]
52. This person’s style of thinking is holistic, impressionistic, and lacking in specific detail. [Impressionistic Response: Gacono; Factor 3]
53. This person readily becomes absorbed or “wrapped-up” in experiences. This includes internal experiences, such as feelings, ideas, and mental images, as well as external events and activities. [Lambda; Blends]
54. This person allows feelings and logical thought to be integrated into his/her decisions and actions. [Total Impulse: PRP; *EB* (ambitent/nonpervasive)]
55. This person does not typically let his/her feelings have an impact on decisions and judgments. [*EB* (Introversive)]
56. This person’s understanding of him/herself and of the environment is uncomplicated and based primarily on what is most obvious. [Lambda]

57. This person has difficulty shifting attention, thinking flexibly, or understanding events from more than one perspective at a time. [*a:p* ratio (imbalanced); *PSV*]
58. This person thinks about and understands events in a rigid, inflexible manner. [*a:p* ratio (imbalanced)]
59. This person is driven to identify and describe the different aspects of his/her experience in an exhaustive, perhaps obsessive fashion. [*R* with Lambda; Factor 1]
60. This person is very exacting and detailed when describing events. [*FQ+*]

Internal Dynamics and Defensive Operations

61. When dealing with pain or conflict, this person primarily uses strategies like thinking about his/her circumstances, asserting him/herself, deflecting the trouble with humor, or putting energy into alternative activities. [Higher Level Denial: *RDS*]
62. This person tries to maintain composure by inhibiting the direct expression of his/her problematic feelings and ideas. [*R* with and Lambda; Factor 1]
63. This person consistently focuses on abstract or theoretical ideas in order to minimize emotional discomfort. [Intellectualization Index; Intellectualization: *RDS*]
64. This person relies on logic, knowledge, and objectivity in order to avoid feelings. [Intellectualization Index; Intellectualization *RDS*]
65. This person minimizes emotional conflict or stress by generating reasons that place his/her own thoughts, behaviors, or feelings in the best possible light. [Rationalization: *RDS*]
66. This person uses socially appropriate explanations in order to make his/her ideas, feelings, or actions seem more acceptable. [Rationalization: *RDS*]
67. This person separates feelings from unpleasant ideas in order to make the ideas more tolerable. [Isolation: *RDS*]
68. This person tends not to be conscious of the feelings associated with painful or troubling events, even though s/he is still quite able to discuss the “facts” associated with these events. [Isolation: *RDS*]
69. To protect against discomfort, this person tries to think of aversive or troubling experiences as being positive, ideal, or optimistic. [Color Projection; Reaction Formation: *RDS*]
70. This person frequently, but unconsciously, substitutes positive emotions for ones s/he experiences as unpleasant or unacceptable. [Reaction Formation: *RDS*; Color Projection]

71. In order to maintain a cheerful, optimistic, and untroubled perception of life, this person selectively perceives events, dismisses conflict, or uses fantasy to reverse his/her feelings. [Pollyanish Denial: *RDS*]
72. This person relies on internal fantasies or daydreams to comfort him/herself or to avoid unpleasant realities in life. [*Ma:Mp* ratio]
73. This person minimizes emotional conflict or stress by transforming unacceptable behaviors, impulses, thoughts, or feelings into their polar opposites. [Reaction Formation: *RDS*]
74. This person has specific experiences s/he does not want to think about or discuss. [Denial: *LDS*]
75. In recounting experiences, this person omits significant details or portions of an event without realizing it. [Denial: *LDS*]
76. This person's history, as s/he relates it to others, has significant gaps because s/he has forgotten significant events or lengthy periods of his/her life. [Denial: *LDS*]
77. This person has strong needs to avoid emotional pain. As a result, s/he may not integrate or acknowledge contradictions in his/her experience, may supplant reality with wished for fantasies, or may simply disregard important elements of his/her experience. [Hypomanic Denial: *RDS*]
78. There are very significant gaps in this person's understanding of him/herself or in his/her understanding of other people. These gaps are prevalent and not necessarily related to the avoidance of troublesome affect. This person accepts these gaps with bland indifference. [Massive or Bland Denial: *RDS*]
79. This person contends with emotional conflict or stress by compartmentalizing and separating experiences on the basis of how they feel. Although s/he can be aware of different feelings at different times, s/he is not able to experience positive and negative emotions at the same time. As a result, s/he does not integrate positive and negative qualities into a cohesive picture of him/herself and other people. [Splitting: *LDS* or *RDS*]
80. Rather than recognizing objectionable feelings or experiences in him/herself, this person attributes these qualities to other people. [Projection: *RDS*]
81. This person enhances his/her self-esteem by devaluing others. [Depreciation: *LDS*; Devaluation: *RDS*]
82. This person is able to breathe on a regular basis. [random responding]
83. This person is self-righteous and prone to use his/her own "personal authority" as a way to defend against feelings of insecurity or inadequacy. [*PER*]
84. This person strives to feel aggressive or powerful in order to compensate for feelings of vulnerability. [Aggressive Potential: *GM-AG*]
85. This person holds an inflated sense of self-worth or importance in order to deny fears of worthlessness and powerlessness. [Omnipotence: *RDS*; *Fr+rF*]

Reality Testing

86. This person sees things from an unconventional, unique, or idiosyncratic perspective. [*Xu%*]
87. When this person becomes angry or oppositional, s/he begins to perceive other people or external events in a less accurate fashion. [*S - %*]
88. When this person experiences any strong feelings, s/he begins to perceive other people or external events in a less accurate fashion. [*X - %* to Chromatic Cards]
89. This person develops mistaken beliefs or significantly distorted perceptions the more s/he thinks about events or reflects on experiences. [*M-*]
90. This person does not perceive even relatively obvious events in a socially conventional way. [Popular]
91. This person has many occasions when his/her perceptions of external events are clearly distorted. [*X - %*]
92. This person has an inaccurate understanding of people or interpersonal behaviors. [*M-*]

Thought Process

93. Without clear external structure, this person's thinking becomes confused and s/he is unable to maintain appropriate distinctions between different events, ideas, and experiences. In other words, his/her thoughts become illogically joined or mixed together. [*FAB + INC*]
94. Without clear external structure, or under the press of strong feelings, this person's thinking is loose, tangential, rambling or flighty. [*DR*]
95. This person has frequent and easily recognized disruptions in formal thought processes. These may be evident in a variety of ways, such as through loose associations, illogical reasoning, using words in odd ways, or having ideas that are inappropriately linked together, among other things. [*WSum6*]
96. This person is distracted by ideas, impulses, or needs to the point that they interfere with his/her ability to concentrate or relax. [*FM+m*]
97. This person tends to justify actions and beliefs with very concrete and simplistic reasoning or with very personalized and faulty logic. [*ALOG*]

Thought Content and Preoccupations

98. This person is captivated by machines, gadgets, electronics, or other inanimate objects. [Object Relations-Animation-Thing: *PRP*]
99. This person admires aggressive people or objects of strength and power. [Aggressive content: *GM-AG*]

100. This person frequently thinks about food. [Object Relations–Animation–Food: *PRP*]
101. This person is often absorbed by strong longings for care and nurturing attention. [Impulses–Oral Receptive: *PRP*]
102. This person’s physical functioning and the well-being of his/her body is never far from mind. [*An+Xy*]
103. This person often thinks about issues of elimination, bowel function, or bathroom experience. [Impulses–Anal: *PRP*]
104. Sexual matters are frequently on this person’s mind. [Sex content]
105. This person constantly thinks about sexual issues and either expresses this directly by making frequent sexual comments or fearfully avoids discussing any sexual topic. [Impulses–Phallic: *PRP*]
106. This person frequently becomes focused on small details related to other people’s appearance or behavior. [Object Relations–Animation–Human Detail: *PRP*]
107. This person’s personal needs and experiences are always on his/her mind. [Egocentricity Index]
108. This person frequently thinks about or expresses graphic and “primitive” ideas (e.g., ideas with very aggressive, sexual, dependent, morbid, or somatic themes). [*EII* Derepressed Content]
109. This person does not keep disturbing internal experiences out of awareness. Instead, s/he is provoked by emotionally intense and compelling ideas related to aggression, sexuality, pain, decay, physical integrity, or hungry neediness. [*EII* Derepressed Content]

Interpersonal Behaviors

110. This person has a sturdy ability to relate to others. S/he feels autonomous, supports the autonomy of others, and recognizes other people may have different interests and needs than s/he. [*MOA*]
111. This person understands people well and has meaningful, stable relationships. [*EII* Human Experience Variable]
112. This person enjoys social interactions and believes they can be harmonious and supportive. [*COP*; *COP:AG* ratio]
113. This person is interested in and very aware of other people. [All H content]
114. This person passively relies on others to provide him/her with direction and security. [a:p ratio]
115. This person yields easily to interpersonal pressure and tends to comply readily with the wishes of others or to what s/he believes others want. [*ROD*; *R*; Factor 1]
116. This person’s self-esteem is dependent on receiving positive regard from others. Therefore, his/her relationships are characterized by a pattern where

- one person consistently admires and reflects the importance of the other. [Object Relations–Mutuality: *PRP*; *Fr+rF*]
117. This person is constantly searching for an ideal friend or partner but ultimately ends up disappointed with all his/her relationships. [Idealization: *LDS*; Primitive Idealization: *RDS*]
118. This person is guarded and withholds personal feelings, thoughts, and reactions. [*R* with Lambda; Factor 1]
119. This person does not seek out emotionally close or affectionate interactions. [*SumT*]
120. This person is very concerned about maintaining independence, defining personal boundaries, and protecting his/her interpersonal space. [*S*]
121. This person has difficulty making compromises in interpersonal interactions. [*S*; *Fr+rF*]
122. This person has underlying oppositional tendencies and expresses anger by being contrary or resistive. [*S*]
123. This person feels aggressive or combative impulses in his/her interactions. [Item 30, repeated]
124. This person expresses veiled aggression through sarcasm, gossip, or by using common verbal expressions that have an aggressive literal meaning. An example of the latter would be to use a quasi-humorous expression when angry such as “I wanted to bite his head off.” [Impulses–Oral Aggressive: *PRP*]
125. This person holds other people responsible for the way s/he feels. [Projection: *RDS*]
126. This person’s behavior toward other people is frequently the opposite of his/her actual feelings (e.g., kindness when feeling anger, etc.). [Reaction Formation: *RDS*]
127. This person has not slept at all during the past three months. [Random responding]
128. This person’s relationships are very inconsistent, quickly fluctuating between clinging dependency and alienating hostility. [Splitting: *LDS* or *RDS*]
129. This person establishes relationships that have a merged quality. S/he seems to lose touch with other people’s individual distinctiveness, identity, and personal motivations. [Object Relations–Differentiation: *PRP*; *POR*]

Interpersonal Beliefs, Representations, and Expectations

130. This person expects his/her intimate relationships to be satisfying and enjoyable. [*SumT*; *COP:AG* ratio]
131. This person anticipates that relationships will be mutually satisfying and believes that each person’s needs will be met in a reciprocal fashion. [Object Relations–Mutuality: *PRP*; *COP*; *COP:AG* ratio]

132. This person sees him/herself as powerless and ineffectual. S/he believes others are stronger and have more control of how situations turn out. [*ROD*]
133. This person regards him/herself as inferior to others. [Item 4, repeated]
134. This person needs to think of other people in an idealized fashion, either as special, important, or powerful. [Idealization: *LDS*; Primitive Idealization: *RDS*]
135. This person ignores negative features in other people, exaggerates their positive qualities, and places them on an undeserved pedestal. [Idealization: *LDS*; Primitive Idealization: *RDS*]
136. This person is self-absorbed and primarily relates to other people as sources of supportive attention or consistent admiration. [*POR*]
137. This person expects to be treated as special or privileged. [Omnipotence: *RDS*; *Fr+rF*]
138. This person experiences relationships as needy and dependent, and believes both parties lack the ability to stand on their own two feet. [*MOA*]
139. This person experiences the environment as dangerous and believes that interactions are fraught with conflict. [*AG*]
140. At least unconsciously, this person sees engulfment or destructiveness as the inevitable consequence of relating to others. [*POR*; *MOA*]
141. Significant malevolence, cruelty, and destructiveness characterize this person's understanding of relationships. [*POR*; *MOA*]
142. This person has a tilted or one-sided view of other people, such that only negative qualities are noticed with no recognition of positive characteristics. [Depreciation: *LDS*; Devaluation: *RDS*]
143. This person views other people with contempt and disdain. [Depreciation: *LDS*; Devaluation: *RDS*]
144. This person thinks of other people in terms of the functions they provide to him/her. [Object Relations–Animation–Human Detail: *PRP*]
145. This person tends to perceive other people in unrealistic ways, such that his/her understanding is based primarily on imaginative or fantasized qualities, rather than on a complex understanding of their actual characteristics. [*H:(H)+Hd+(Hd)* ratio]
146. This person sees other people in an exaggerated and emotionally polarized manner as either all “good” or all “bad.” His/her perceptions alternate between opposites that range from seeing others as loving, powerful, important, worthy, nurturing, or kind, to hateful, weak, worthless, destructive, or rejecting. [Splitting: *LDS* or *RDS*]
147. This person relates to other people on the basis of how well they can meet his/her needs and experiences them as either totally satisfying or totally frustrating. [Splitting: *LDS* or *RDS*]
148. In important relationships this person assumes one party will have most of the power and control. [Object Relations–Mutuality; *PRP*]

Interpersonal Experiences and Feelings

149. This person feels free to interact closely with others, without fear of losing identity and without fear that others will be overly intrusive. [Object Relations–Differentiation: *PRP*]
150. This person loses a clear sense of personal identity when s/he gets emotionally close to others. [*POR*]
151. This person has permeable psychological boundaries and experiences his/her personal thoughts and feelings as transparent to others and vulnerable to their influence. [Ego Structure–Boundary: *PRP*]
152. This person has difficulty distinguishing his/her personal feelings from the emotions of other people. Without recognizing it, s/he generates his/her own conflictual feelings in others, but then believes other people have caused him/her to feel the way s/he does. [Projective Identification: *LDS* or *RDS*]
153. In relationships, this person experiences polarized reactions regarding control. S/he feels either controlled by others or controlling of them, coerced by others or coercive of them. [*POR*; *MOA*]
154. This person desires close and intimate relationships. [*SumT*]
155. This person has strong needs for support and nurturance. [Food]
156. This person is highly motivated to obtain guidance, approval, and support from other people. [*ROD*]
157. This person feels lonely and has strong wishes to be emotionally connected with others. [*SumT*]
158. This person feels distant or isolated from others. [Item 27, repeated]
159. In interpersonal relationships this person feels s/he is the object of aggressive verbal criticism or physical attack. [Aggression–Past: *GM–AG*]
160. This person experiences pleasure in the suffering of others. [Sadomasochistic response: *GM–AG*]
161. This person experiences pleasure by maintaining power and control over others. [Sadomasochistic response: *GM–AG*]
162. This person does not communicate many of his/her feelings in words, but instead, by stirring those feelings in others. [Projective Identification: *LDS* or *RDS*]
163. When I am with this person, I find myself experiencing feelings that are atypical and do not seem to be my own. [Projective Identification: *LDS* or *RDS*]

Other Personality Characteristics

164. This person's thoughts and feelings are rich and varied (although they may not necessarily be adaptive or realistic). [Factor 1; *R* with Lambda; Complexity Index]

165. This person feels resilient and knows that even when upset s/he will regain emotional equilibrium. [Ego Structure–Stability: *PRP*]
166. This person has an “observing ego,” which allows him/her to step back from events and take a detached perspective on his/her experience. [*FD*]
167. This person is introspective. [*FD*]
168. This person is concerned with how others perceive him/her and so consistently evaluates his/her behavior. [*FD*]
169. This person tends to become anxious and fearful when s/he has to function independently, especially when s/he will also be evaluated by others. [*ROD*]
170. This person has never felt anger at any time in his/her life. [random responding]
171. This person thinks or behaves in a very conventional fashion. [Popular]
172. This person has trouble articulating personal feelings, thoughts, and reactions because s/he has limited psychological resources or limited awareness. [*R* with Lambda; Factor 1]
173. This person has a style of relating to other people or to work that is characterized by energetic but superficial engagement (as opposed to less frequent but more intense engagements). [Factor 2]
174. S/he is the type of person who has a global, diffuse, and impressionistic style of thinking, is very affected by emotions, and often behaves in a spontaneous or dramatic way. [Factor 3]
175. This person’s emotions are strong and directly color how s/he thinks about events, perceives him/herself, and perceives the world. [*EB* (Extratensive)]
176. This person relies on logic, knowledge, and objectivity in order to avoid feelings. [Item 64, repeated]
177. This person has the sense that s/he is “falling apart” when s/he feels emotionally distressed. [Ego Structure–Stability: *PRP*]
178. This person frequently makes spur-of-the-moment decisions based on his/her feelings without much concern for logical reasoning. In other words, s/he has highly charged emotional reactions that allow wishes or feeling states to immediately determine action. [Total Impulse: *PRP*]
179. This person is compelled by internal pressure and stress to act impulsively or rashly. [*D* score]
180. This person responds hastily to any sense of irritation or to any internal need state. [*FM*]
181. This person is concerned with issues of nurturance or consumption. This may be evident by strong interests in food or eating-related pleasures, an involvement with toys or other childhood objects, or preference for a passive and dependent position in relationships. [Impulses–Oral Receptive; *PRP*]
182. This person has many long-standing personality and behavior problems. [*EII*]

183. This person is significantly threatened by disorder, "messiness," or uncleanliness. [Impulses–Anal: *PRP*]
184. This person's interest in sexual matters is expressed in an indirect manner, through a keen awareness of physical attractiveness, a need to be admired, or exhibitionistic tendencies. [Impulses–Phallic: *PRP*]
185. This person relies on internal fantasies or daydreams to comfort him/herself or to avoid unpleasant realities in life. [Item 72, repeated]

Note. From "The Rorschach Rating Scale: Observer-Rating (Mixed-Gender, Female, & Male Formats) and Self-Rating Forms" by G. J. Meyer, D. J. Viglione, Jr., B. Ritzler, N. Kaser-Boyd, C. Adrian, C. Gacono, W. Burke, G. Friedman, P. Gorlitz, P. M. Lerner, S. B. Tuber, & R. F. Bornstein, 1996, unpublished scales and tables, University of Alaska Anchorage. Copyright © 1993, 1995, 1996 by Meyer, Viglione, Ritzler, Kaser-Boyd, Adrian, Gacono, Burke, Friedman, Gorlitz, Lerner, Tuber, & Bornstein. Individuals wishing to use RRS items for noncommercial research or educational purposes are free to do so. Contact the first author for copies of complete RRS forms and for a full description of the RRS items (i.e., those that are experimental, the expected direction of relationships with Rorschach scores, and recommended cut-offs for CS scores).

RRS variables listed previously are from the Comprehensive System unless otherwise noted. *GM–AG* = Gacono and Meloy's Aggressive Responses; *LDS* = Lerner and Lerner's Defense Scales; *MOA* = Urist's Mutuality of Autonomy Scale; *POR* = Kwawer's Primitive Object Relations Scale; *PRP* = Burke, Friedman, and Gorlitz's Psychoanalytic Rorschach Profile; *ROD* = Masling and Bornstein's Rorschach Oral Dependence Scale; and *RDS* = Cooper, Perry, and Arnow's Rorschach Defense Scales.

APPENDIX B
Intercorrelations Among the B5M Scales and RRS Scales

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. B5M-N														
2. B5M-E	-.01													
3. B5M-O	.05	.31												
4. B5M-A	-.42	.19	.32											
5. B5M-C	-.27	.15	.37	.47										
6. NAD	.50	-.03	-.27	-.66	-.42									
7. PDTD	.39	-.09	-.25	-.47	-.38	.52								
8. PDVI	.47	-.20	-.22	-.19	-.31	.38	.42							
9. EHCE	-.54	.19	.21	.49	.35	-.35	-.44	-.36						
10. SEE	.14	.39	.45	.36	.28	-.20	-.23	-.03	.21					
11. IDOC	-.05	-.06	.17	-.07	.18	.20	-.01	-.09	.15	-.02				
12. RRS-N	.68	-.20	-.24	-.47	-.44	.51	.66	.72	-.69	-.13	-.05			
13. RRS-E	-.43	.37	.38	.68	.43	-.54	-.64	-.33	.64	.53	-.02	-.65		
14. RRS-O	-.18	.37	.54	.52	.37	-.47	-.48	-.24	.45	.62	-.09	-.45	.64	
15. RRS-A	-.51	.14	.27	.78	.41	-.83	-.58	-.32	.53	.37	-.14	-.63	.70	.59
16. RRS-C	-.32	.13	.38	.44	.59	-.38	-.42	-.30	.67	.27	.38	-.49	.52	.41
17. DANA	.14	-.17	-.11	-.32	-.22	.52	.37	.23	.00	-.22	.69	.27	-.34	-.35
18. PD	.44	-.04	-.21	-.59	-.40	.64	.81	.42	-.55	-.20	.07	.66	-.65	-.47
19. DPB	.57	-.10	-.29	-.55	-.46	.69	.71	.67	-.51	-.19	.01	.79	-.66	-.49
20. PSOR	.52	-.12	-.31	-.61	-.42	.76	.66	.64	-.51	-.23	.01	.72	-.64	-.53
21. Na	.54	-.03	-.24	-.67	-.48	.91	.49	.38	-.45	-.17	.16	.54	-.56	-.47
22. EC	-.46	.33	.37	.55	.44	-.49	-.61	-.51	.72	.31	.17	-.74	.69	.55
23. GVIT	.45	-.03	-.27	-.47	-.46	.52	.77	.45	-.54	-.11	-.19	.64	-.54	-.37
24. FTD	.31	-.12	-.24	-.44	-.38	.51	.70	.44	-.32	-.23	.02	.56	-.56	-.38
25. GME	.29	-.12	-.22	-.33	-.34	.43	.79	.35	-.32	-.21	.08	.54	-.54	-.44
26. ES	.26	.28	.22	.18	.06	-.08	-.06	.10	.04	.74	-.16	.11	.24	.39
27. DNO	.47	-.12	-.15	-.13	-.27	.38	.35	.81	-.31	.13	-.03	.60	-.19	-.17
28. PPI	.50	-.11	-.26	-.64	-.45	.78	.60	.40	-.54	-.22	.10	.60	-.60	-.52
29. SP	.29	.14	.00	-.22	-.11	.51	.34	.18	-.08	.15	.04	.22	-.13	-.09
30. ASUD	.46	.00	-.12	-.45	-.24	.57	.52	.39	-.33	-.05	.03	.46	-.40	-.28

(Continued)

APPENDIX B (Continued)

Scale	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1. B5M–N															
2. B5M–E															
3. B5M–O															
4. B5M–A															
5. B5M–C															
6. NAD															
7. PDTD															
8. PDVI															
9. EHCE															
10. SEE															
11. IDOC															
12. RRS–N															
13. RRS–E															
14. RRS–O															
15. RRS–A															
16. RRS–C	.45														
17. DANA	-.42	-.00													
18. PD	-.69	-.45	.40												
19. DPB	-.68	-.43	.42	.75											
20. PSOR	-.76	-.46	.39	.73	.83										
21. Na	-.77	-.45	.45	.63	.66	.73									
22. EC	.60	.62	-.18	-.65	-.64	-.66	-.53								
23. GVIT	-.55	-.63	.20	.69	.65	.64	.52	-.63							
24. FTD	-.50	-.38	.38	.71	.68	.68	.50	-.50	.56						
25. GME	-.46	-.28	.40	.60	.58	.52	.42	-.41	.48	.55					
26. ES	.14	.04	-.15	-.07	.03	-.03	-.06	.12	.07	-.07	-.09				
27. DNO	-.28	-.29	.21	.38	.53	.49	.37	-.43	.43	.40	.32	.15			
28. PPI	-.76	-.46	.39	.71	.66	.69	.77	-.64	.58	.48	.44	-.07	.37		
29. SP	-.33	-.14	.17	.34	.39	.35	.34	-.14	.30	.25	.29	.09	.31	.32	
30. ASUD	-.49	-.23	.29	.56	.56	.58	.55	-.41	.54	.51	.29	.04	.36	.57	.35

Note. B5M = Big Five model; RRS = Rorschach Rating Scale; N = Neuroticism; E = Extraversion; O = Openness; A = Agreeableness; C = Conscientiousness; NAD = Narcissism, Aggression, and Dominance; PDTD = Perceptual Distortions and Thought Disorder; PDVI = Passive Dependence, Vulnerability, and Inferiority; EHCE = Emotional Health and Coping Effectiveness; SEE = Social and Emotional Engagement; IDOC = Intellectual Defenses and Obsessive Character; DANA = Defensive Avoidance of Negative Affect; PD = Perceptual Distortions; DPB = Diffuse Psychological Boundaries; PSOR = Polarized Self- and Object-Representations; Na = Narcissism; EC = Effective Coping; GVIT = Global, Vague, and Impressionistic Thinking; FTD = Formal Thought Disorder; GME = Gaps in Memory or Experience; ES = Emotional Spontaneity; DNO = Dependent Needs for Others; PPI = Projection and Projective Identification; SP = Sexual Preoccupations; ASUD = Attention to Small/Unusual Details. All scales reported in this table are derived from the sum of raw item responses; they are not factor scores for underlying dimensions. Correlations greater than .16 are statistically significant at the .01 level; correlations greater than .13 are statistically significant at the .05 level.